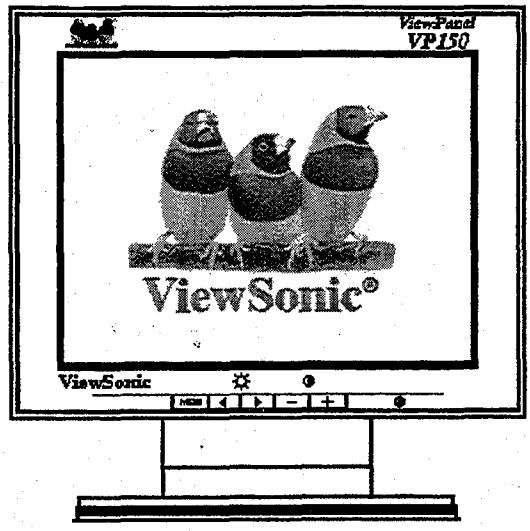
# Service Manual

# ViewSonic VP150 ViewPanel™

## Model No. VLCDS21433-1

## *15" Active Matrix XGA LCD Color Monitor*




(Rev. 1 - December 1998)

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# Revision History

| Revision | Date | Description Of Changes | Approval |
|---|---|---|---|
| 1.0 | 12/15/97 | Initial Issue | T. Sears |
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# ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.

It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians.

Any attempt to service or repair the product or products dealt within this service information by anyone else could result in serious injury or death.

## SAFETY PRECAUTIONS

**1 CAUTION:**
No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guide lines.

**2 SAFETY CHECK**
Care should be taken while servicing this LCD monitor because of the high voltage used in the inverter circuits.

**3 FIRE & SHOCK HAZARD**

3-1 In servicing pay attention to original lead dress especially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.

3-2 All the protective devices must be reinstalled per original design.

3-3 Soldering must be inspected for possible cold solder joints, frayed leads, damaged insulation, solder splashes or sharp solder points. Be certain to remove all foreign material.

**4 LEAKAGE CURRENT HOT CHECK**

4-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.

4-2 Connect a 1500 ohm, 10 watt resistor, paralleled by a 0.15μF capacitor between each exposed metallic part and a good earth ground (as shown in Fig.1).

4-3 Use an AC voltmeter with 1000 ohm/volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and 0.15μF capacitor.

4-4 Move the resistor connection to each exposed metallic part and measure the voltage.

4-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.

4-6 Voltage measured must not exceed 7.5 volt RMS, from any exposed metallic part to ground A leakage current tester may be used in the above hot check, in which case any current measured must not exceed 5.0 milliamp. In the case of a measurement exceeding the 5.0 milliamp value, a rework is required to eliminate the chance of a shock hazard.

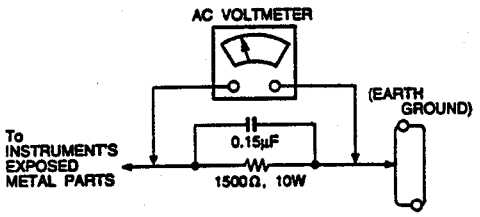



**Fig.1**

## CAUTION FOR ADJUSTMENT AND REPAIR

1. If you check or adjust electrical specification or function, more than 30 minutes burn-in is required.
2. Reforming of the lead wire is required after your repair work.
3. Prior to starting work, be sure to check that the input signal is at the specified timing and that the polarity is as specified in all modes.
4. Always unplug the unit before beginning any operation such as removing the chassis.
5. Brightness stabilizing time: It takes about 20 to 50 seconds for the brightness to stabilize after turning the power off for 5 seconds (AC). Therefore, care should be taken to this.

# PRECAUTIONS TO BE OBSERVED IN USING LCD PANEL

(1) The LCD panel is made of glass and requires care to keep it from vibration, shock, etc.

(2) The LCD panel has a very thin liquid crystal layer about 5 μm, and the glass surface opposite to it is specially treated (oriented) to ensure display performance. Therefore, attention must be paid to the following instructions.

1) Do not press hard the LCD panel surface. If it is accidentally pressed in the assembly process, leave it without power for a while before supplying power to it.

2) Be careful not to distort the LCD panel during mounting.

(3) Be careful not to expose the LCD panel to high temperature or high humidity (over 75% RH) for a long time.

(4) Cleaning the LCD panel

The deflection plate that covers the whole display unit is liable to damage, so requires due care in handling it.

To clean the surfaces, soak a soft cloth, such as gauze, with one of the following solvents and carefully wipe the surfaces.

- Isopropyl alcohol (recommended)
- Ethyl alcohol

D'ont wipe the plate surface by gaze or other soft cloth without solvents, otherwise it might be scrached. Avoid using any of the following solvents because they cause the deflection plate to dissolve or discolor.

- Ketone (acetone, etc.)
- Aromatics (xylene, toluene, etc.)

(5) Be careful not to expose the LCD panel in electro static because CMOS-LSI are installed inside. And especially be careful to interface connector.

(6) Take care not give undue shock to the body, or don't damage it by applying an excessive torque to the screws during mounting.

(7) If a LCD panel dropped on a concrete floor, for example, don't use it and treat as defective.

(8) After-image

If the same image is shown on the LCD panel for many hours, image might stay on it as an after-image. However, the LCD panel will be recovered to normal condition after it is left for about a day, which varies depending on the case.

# GENERAL INFORMATION

## 1. OUTLINE

**VP150** Series are 15 inch (15.0 viewable) multi-scan color LCD (Liquid Crystal Display) monitor with the following nice features (Easy to Use, Easy to See, Good Design, New function).
Original pixel conversion technology is newly introduced, which optimize the function.

## 2. FEATURES

### 2-1 EASY TO USE

2.1.1 FULL PLUG COMPATIBLE WITH EXISTING CRT MONITOR

- Analog RGB ( Red, Green and Blue ) interface
- Input connector : 15pin Mini D-sub composite, Sync on Green
- Sync signal : H/V separate, H/V composite, Sync on green

2.1.2 HIGH OVALITY TFT COLOR LCD WITH WIDE VIEWING ANGLE

- Large size TFT LCD (15" Fully viewable screen) is corresponding to XGA (1024x768)
- Viewable area is nearly equal to 17" CRT monitor
- Viewable angle are wide angle by the wide view film.(Right & Left : ±70degress,Up : 50degrees, Down : 70degress)
- TFT LCD panel is High brightness (250cd/m² typical), High contrast (200:1) and Fast response.

2.1.3 VARIABLE SCAN DISPLAY & FULL SIZE DISPLAY

Panasonic pixel converter LSI and 16bit microprocessor control the circuit operation to meet the wide range of signals (fH=30~61kHz, fV=50~77 Hz) by VESA GTF (Generalized Timing Formula)Standard Ver 1.0 Rev.1.0 of default parameter value.
So,VGA (640x480),SVGA (800x600),and XGA (1024x768) are applicable.
Use of Panasonic pixel conversion method enables full-screen display of all mode.
(Full-screen display may not be possible depending on the input signal timing.)

2.1.4 HIGH OVALITY COLOR

- The true color display (16.19 million colors) is realized by Panasonic Error Dispersion technology.
- Color temperature of Back Light is 6500k.

2.1.5 STEREO SPEAKERS FOR HIGH OVALITY STEREO SOUND

- High quality sound by Bass-Reflex Speaker Box and Bass-Boost circuit technology.
- Stereo speakers (1W+1W).
- An external headphone jack is mounted on the front panel of monitor for additional use.

2.1.6 LONG LIFE BACK-LIGHT

- Back Light with a long life span of 50,000 hours (typical).
- Easy serviceability.(side change)

### 2-2 NEW FUNCTIONS

2.2.1 OSD (On Screen Display) CONTROL

- OSD functions are easy and excellent man-machine interface and are able to operate by 8 buttons on front panel.

2.2.2 UPGRADE AUTO ADJUSTMENT FUNCTION

Almost any timing will be tuned by AUTO-SIZE function in OSD menu for compatible PLL (Phase Locked Loop) clock phase,clock frequency,horizontal & vertical size and position.

2.2.3 VIDEO LEVEL AUTO ADJUSTING FUNCTION

Video input signal from 0.7Vpp to 1.0Vpp are adjusted automatically to the best condition by the video input level control in OSD menu.

2.2.4 PICTURE FUNCTION

Image quality can be set to four different modes to match the using image.

2.2.5 USB-HUB IN THE PEDESTAL

4Down stream ports and 1Up stream USB-Hub port (No monitor control function)
USB: Universal Serial Bus

2.2.6 PLUG & PLAY

VESA-DDC 1/2B compatible.

### 2-3 GOOD DESIGN

2.3.1 SOPHISTICATED SHORT FOOTPRINT DESIGN

- Compact: Desk space is 1/3 of 17" CRT monitor.
- BUilt-in AC power Supply circuit (No AC/DC adapter)
- Keyboard space: A space for keyboard is secured on the pedestal of monitor for your space-saving.
- Wall mount: The pedestal of monitor is able to removed.
- Physical Security: KENSINGTON Micro Saver Security System.

2.3.2 ERGONOMICS DESIGN

- Low radiation and static electricity design to meet MPR II & TCO'92.
- Built in power saving function based on VESA-DPMS and ENERGY STAR® 98.

## 1.0 SCOPE

### 1.1 Introduction

| | |
|---|---|
| Product Configuration | This specification defines the configuration and performance requirements for the following monitors: |
| Worldwide | Product Name **ViewSonic VP150**<br>Model Number **VLCDS21434-1** |

### 1.2 Product Definition

| | |
|---|---|
| Top Level Assembly | 1. VP150<br>2. Power Cable (US)<br>3. Power Cable (Europe-PC Type)<br>4. Power Cable (Europe-Schuko Type)<br>4. Video Cable<br>5. User's Guide<br>6. VS INF Diskette/CDRom<br>7. Mac Adapter |

## 2.0 GENERAL REQUIREMENTS

### 2.1 General Specifications

| | |
|---|---|
| Test Resolution & Frequency | Factory Presets |
| Test Image Size | Full Size |
| Contrast and Brightness Controls | Factory Default. |

## 3.0 VIDEO INTERFACE

### 3.1 Video Interface

| | |
|---|---|
| Connector(s) | DB-15 |
| Default Input Connector | DB-15 |
| Video Cable Length | 1.83 meter (typ) |
| Video Cable Color | ViewSonic Gray |
| Video Cable Strain Relief | Twice the weight of the monitor or 18 kg for five minutes. |
| Video Cable Connector DB-15 Pinout | Compliant with IBM 8513 and VESA DDC 1/2B. |
| Video Signals | 700 mV full scale, 1,000 mV full scale |
| Video Impedance | 75 Ohms |
| Maximum PC Video Signal | 950 mV with no damage to monitor |
| Maximum Mac Video Signal | 1250 mV with no damage to monitor |
| Sync Signals | TTL w/10k ohm internal pull-up resistors. |
| DDC 1/2B | Compliant with Revision 1.0 |
| Sync Compatibility | Separate Sync, Composite Sync, Sync on Green. |

| | |
|---|---|
| Video Compatibility | Shall be compatible with all PC type computers, MacIntosh computers, and after market video cards. |
| Resolution Compatibility | 350, 400, 480, 600, 624, and 768 lines |
| Exclusions | Interlaced Modes |

## 4.0 POWER

### 4.1 Power Supply

| | |
|---|---|
| External Power Supply | N/A |
| Input Voltage Range | 90 to 264 VAC |
| Input Frequency Range | 47 to 63 Hertz |
| Fuse | Internal and not user replaceable |
| Power Dissipation | 35 W (Typ), 40W (Max) |
| Power Supply Inrush | < 30 amperes for ½ cycle @ 100VAC<br>< 50 amperes for ½ cycle @ 240VAC |

### 4.2 Power Interface

| | |
|---|---|
| Monitor Power Connector | CEE 22 |
| Power Cable Length | 1.83 meter (typ) |
| Power Cable Color | ViewSonic Gray |
| US Type Power Cable | 3-prong NEMA 5-15P type plug |
| European Type Power Cable | PC Type<br>Schuko (Later date Phase-In) |

### 4.3 Power Saving Operation

| | |
|---|---|
| Method | VESA DPMS Signaling |
| Power Consumption | ON Mode < 35 W (typ)<br>STAND BY / SUSPEND < 15 W<br>OFF < 5 W |
| Recovery Time | ON Mode = N/A<br>STAND BY / SUSPEND < 4 sec<br>OFF < 5 sec |

## 5.0 FRONT PANEL CONTROLS AND INDICATORS

### 5.1 Front Panel Hardware Controls

| | |
|---|---|
| Power Switch (Side) | Power Control |
| Power LED | Green – ON<br>Yellow - DPMS Standby<br>Yellow - DPMS Suspend<br>Yellow - DPMS Off |
| Front Panel Controls | MENU, <, >, -, + |

| 5.2 Video Controls | |
|---|---|
| Control Type | Digital with an OSD. |
| OSD Controls | Contrast, Backlight, Brightness, H. Position, V. Finetune (XGA), V. Position, H. Finetune (XGA), H. Size (except XGA), V. Size (except XGA), Color Temp, Video Input Level, Display Frequency, Language, Auto Size, Recall, OSD Position, Picure |
| | The OSD shall save new settings when it is turned off the by the user or when it times out. There shall not be a separate save. |

## 6.0 ELECTRICAL REQUIREMENTS

### 6.1 Horizontal / Vertical Frequency

| | |
|---|---|
| Horizontal Scan Range | 30-61 KHz |
| Vertical Refresh Rate | 50-77 Hz |
| Sync Polarity | Independent of sync polarity. |

### 6.2 Primary Preset

| | |
|---|---|
| Primary Preset # 1. | VESA 1024 x 768 @ 75Hz |

### 6.3 Other Factory Presets

| | |
|---|---|
| IND 640 x 480 @ 60Hz | VESA 800 x 600 @ 72Hz |
| IND 640 x 400 @ 70Hz | MAC 832 x 624 @ 75Hz |
| VESA 640 x 480 @ 72Hz | VESA 1024 x 768 @ 60Hz |
| MAC 640 x 480 @ 67Hz | VESA 1024 x 768 @ 70Hz |
| VESA 640 x 480 @ 75Hz | VESA 1024 x 768 @ 72Hz |
| VESA 800 x 600 @ 56Hz | VESA 1024 x 768 @ 75Hz |
| VESA 800 x 600 @ 60Hz | MAC 1024 x 768 @ 75Hz |
| VESA 800 x 600 @ 75Hz | |

### 6.4 User Presets

| | |
|---|---|
| Number of User Presets Available | 16 |

### 6.5 Changing Modes

| | |
|---|---|
| Maximum Mode Change Blank Time for image stability. | 3 sec |
| Mode Change Image | The image shall blank while the monitor changes modes |

## 7.0 LCD PANEL

| 7.1 Panel Specifications | |
|---|---|
| LCD Panel | **Panasonic EDTCF02QAF** |
| Diagonal | **15.0** inches |
| Pixel Pitch | **0.297** mm |
| Faceplate Treatment | **Anti Glare Hard Coat (3H)** |
| Response Time (Typ) | Tr = **11** ms, Tf = **19** ms |
| Aspect Ratio | 4:3 |
| Backlight Life (to 50% Brightness) | 30,000hrs (Min), 50,000 (Typ) |

## 8.0 IMAGE PERFORMANCE

8.1 Factory Defaults

| | |
|---|---|
| Preset Color 1 | x = 0.315, y = 0.333 |
| Contrast Control | Factory Default |
| Brightness Control | Factory Default |
| 8.2 Display Size | |
| Horizontal Display Size, Primary Preset | **304.1** mm |
| Vertical Display Size, Primary Preset | **228.1** mm |
| Display Size Adjustment | All preset modes shall expand to full screen size via User Control. |
| 8. 3 Luminance | |
| Uniformity (Max / Min) 5pt Measurement<br>9pt Measurement | **1.2 (Max)**<br>**1.4 (Max)** |
| Luminance | **> 200** nits (min),<br>**250** typical (Center of Screen) |
| 8.4 Frame Refresh Rate | |
| Frame Frequency | **50 – 77** Hz, **75Hz** Optimum |
| 8.5 Viewing Angles | |
| Contrast Ratio | **> 100 (200** Typical), Center of Screen |
| Viewing Angle (Typ) (CR > 5) | Up/Down >/= **50 / 70°**<br>Left/Right >/= **70 / 70°** |
| Viewing Angle (Min) (CR > 5) | Up/Down >/= **30 / 45°**<br>Left/Right >/= **50 / 50°** |
| Luminance Level at 45° Viewing Angle | ½ of 0° viewing angle |

| | |
|---|---|
| 8.6 Focus | |
| Focus | Focus shall be visibly clear, crisp, and sharp over the entire surface of the LCD after adjustment.. |
| 8.7 Preset Color Temperatures | |
| Preset 1 | Panel Color, x = 0.315, y= 0.333 |
| Preset 2 | 9300k, x = 0.283, y = 0.298 |
| 8.8 Video Cards | |
| Video Compatibility | The monitor shall be compatible with all PC Type computers, Macintosh computers, and after market video cards. |
| 8.9 Raster Artifacts | |
| Video Artifacts | No Visible Streaking, Sag, or Smearing Artifacts when driven by the specified video cards in the primary mode and after user adjustment to best condition. |
| Power Supply, and Grounding Artifacts | No visible artifacts in any specified video mode within the horizontal or vertical frequency range of the monitor |
| Temperature Drift | Image shall not drift or lose fine-tune adjustment due to variations in temperature. |
| Voltage Drift | Image shall not drift or lose fine-tune adjustment due to variations of AC Input Voltage. |

## 9.0 SCREEN DEFECTS

### 9.1 Missing Pixels.

| Defect Dot (or Sub-Pixel) Definition | | A dot (R, G, or B) is considered defective if observed by a standard observer from a distance of 24" using Flat Red, Blue, Green, White, and/or Black Patterns. | |
|---|---|---|---|
| Defect Item | Size of Defect Unit : D (Dot) | Max Permissible Number | Max Permissible Distance |
| Bright Dots *1 | 1<= D < 2 | 9 | 10mm |
| | 2<= D < 3 | 3 | 10mm |
| | 3<= D | None | ---- |
| | Total Number | 12 | --- |
| Dark Dots *2 | 1<= D < 3 | 11 | 5mm |
| | 3<= D | None | ---- |
| *1 The defects of Bright Green Dots shall not be adjacent to each other.<br>*2 R, G, and B Dark Dots are less than n=6 each. | | | |

| 9.2 Cosmetic Defects | |
|---|---|
| Scratch on Polarizer | Length <= 10 mm |
| Dent on Polarizer | Depth <= 0.5 mm or N <= 10 |
| Black Spots with B/L Operating | Diameter(avg) <= 0.5 mm, N<= 10 |
| Lint | L<=3.0mm, N<=10 |

## 10.0 MECHANICAL

### 10.1 Bezel Opening

| Diagonal Bezel Opening | 304.1 x 228.1 mm (Min) |
|---|---|

### 10.2 Dimensions

| | |
|---|---|
| Width | 385 mm |
| Height | 390.7 mm |
| Depth | 83.9 mm (Without Base) |
| Footprint Width | 266 mm |
| Footprint Depth | 180 mm |
| Monitor Weight | 6.8 kg (Typ) |

| 10.3 Tilt | |
|---|---|
| Up | 30 degrees |
| Down | 0 degrees |

## 11.0 ENVIRONMENTAL

### 11.1 Environmental Conditions

| | |
|---|---|
| Operating Temperature | 0°C to +35°C |
| Storage Temperature | -20°C to +60°C |
| Operating Relative Humidity | 5% to 95% Non-Condensing |
| Storage Relative Humidity | 5% to 95% Non-Condensing |
| Operating Altitude | 0 to +3,000 meters |
| Storage Altitude | 0 to +12,000 meters |

## 12.0 REGULATORY AND SAFETY:

### 12.1 North America

| | |
|---|---|
| Regulatory Filing | Regulatory filing should be made under the "Model Number-XY" |
| | UL1950<br>DHHS Part 21, Subpart J<br>FCC, Part 15, Subpart J, Subpart B<br>EPA Energy Star (Applied by VS)<br>CSA 22.2 No. 950-M1989<br>DOC, ICES-003, Class B |

### 12.2 International

| | |
|---|---|
| | EN 60950 and TUV/GS Mark<br>MPRII<br>TCO 95<br>ISO 9241-3<br>NEMKO, DEMKO, SEMKO, SETI<br>CE<br>CB Report<br>CB Certificate<br>BCIQ<br>C-Tick |

### 12.4 Power Management

| | |
|---|---|
| Power Management | Energy 2000 (Applied by VS) |
| | Amendment to EnergyStar Version 2 MOU |

## 13.0 CODING ASSIGNMENT

### 13.1 Product Name and Model Number

| | |
|---|---|
| Product Name | ViewSonic **VP150** |
| WorldWide Model | Model Number: **VLCDS21434-1** |
| 13.2 Serial Number Format | |
| Format | PPYWWnnnnn where<br>PP = Regional Product ID Code<br>Y = Last digit of manufacturing year<br>WW = Manufacturing week<br>nnnnn = Sequence number |
| 13.3 Regional Product ID Code | |
| WorldWide Model | ID Code: **E8** |
| 13.4 UPC Coding (Code '39' format) | |
| WorldWide Model | UPC Code: **766907 05802 4** |
| 13.5 FCC ID Code | |
| FCC ID | GSS15018 |

## 14. LCD SPECIFICATIONS

### 14.1 GENERAL SPECIFICATIONS

| | |
|---|---|
| Part No. | EDTCF02QAF,38cm Color TFT LCD Module |
| Type | 15 inch (15.0 inch viewable) |
| Drive system | a-Si TFT Active Matrix Type |
| Pixel Arrangement | RGB vertical stripe |
| Display Mode | Normally White |
| Dimension of Outline | 355(W) x 263.1(H) x 18(D)mm Max. |
| Effective Display Area | H : 304.1mm x V : 228.1mm |
| Resolution | XGA (1024 x 768) |
| Number of Pixels | H : 1024 x V : 768 pixels |
| Pixel Pitch | H : 0.297 x V : 0.297 mm |
| Contrast Ratio | 200 : 1 (typical), 100 : 1 (Min.) |
| Face Coating | Anti-glare Hard Coating Type |
| Number of Color | 262, 144 colors |
| Viewing Angle Range (contrast ≥ 10) | V : +40° /-60° ,H : ±60° (typical) |
| Viewing Angle Range (contrast ≥ 5) | V : +50° /-70° ,H : ±70° (typical)<br>V : +30° /-45° ,H : ±50° (Max.) |
| Response Time | ton : 11ms, toff : 19ms (typical)<br>ton : 11ms, toff : 29ms (Max.) |
| Back Light | Edge light Type (Cold cathode type) |
| Response Time of Back Light | 50,000 hours (Typ.) * 30,000 hours (Min.) * |

Note : The TFT color LCD contains cold cathode fluorescent lamps.
Please follow local ordinances or regulations for its disposal.

*The luminance of Back Light will become to a 50% of initial luminance.

### 14.2 SPECIFICATIONS OF SCREEN DEFECTS

14.2.1 Standard Conditions

Environment : Darkroom, 25±5℃,40-70% RH

Screen Size : 304.1mm x 228.1mm

14.2.2 Defects of Lines

Not Visible

14.2.3 Defects of Points (Dot)

| Defects Item | Size of defect UNIT D (Dot) | Max.permissible number | Max.permissible distance | |
|---|---|---|---|---|
| Bright point | D < 1 | ----- | ----- | |
| | 1 ≤ D < 2 | 9 | 10mm | |
| | 2 ≤ D < 3 | 3 | 10mm | *1 |
| | 3 ≤ D | None | ----- | |
| | Total number | 12 | ----- | |
| Dark point | D < 1 | ---- | ----- | |
| | 1 ≤ D < 3 | 11 | 5 mm | *2 |
| | 3 ≤ D | None | ----- | |

*1 The defects of green bright point should not be adjacent to each other.

*2 R,G and B dark points are less than 6 each.

# TIMING CHART

| | |
|---|---|
| A | Period |
| B | Blanking |
| C | Sync Width |
| D | Back Porch |
| E | Active |
| F | Front Potch |

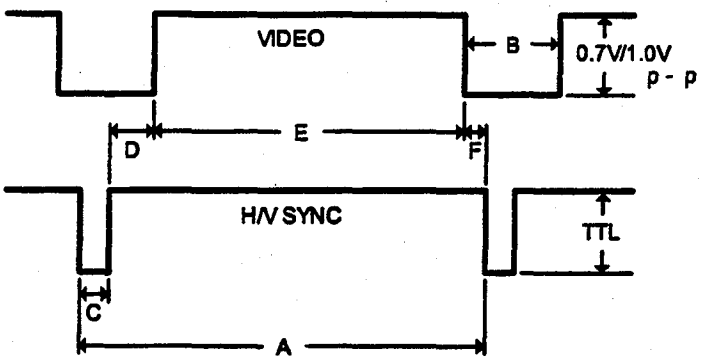



Fig.1

| | | RESERVATION MODE - 1 | RESERVATION MODE - 2 | RESERVATION MODE - 3 |
|---|---|---|---|---|
| | | 640 × 480 (60) | 640 × 400 (70) | 640 × 480 (72) |
| DOT CLOCK | | 25.1745 MHz | 25.1745 MHz | 31.5000 MHz |
| H | f H | 31.4681 kHz | 31.4681 kHz | 37.8606 kHz |
| | A - PERIOD | 31.778 µs ( 800 dots ) | 31.778 µs ( 800 dots ) | 26.413 µs ( 832 dots ) |
| | B - BLANKING TIME | 6.356 µs ( 160 dots ) | 6.356 µs ( 160 dots ) | 6.095 µs ( 192 dots ) |
| | C - SYNC WIDTH | 3.813 µs ( 96 dots ) | 3.813 µs ( 96 dots ) | 1.270 µs ( 40 dots ) |
| | D - BACK PORCH | 1.907 µs ( 48 dots ) | 1.907 µs ( 48 dots ) | 4.063 µs ( 128 dots ) |
| | E - ACTIVE TIME | 25.423 µs ( 640 dots ) | 25.423 µs ( 640 dots ) | 20.317 µs ( 640 dots ) |
| | F - FRONT PORCH | 0.636 µs ( 16 dots ) | 0.636 µs ( 16 dots ) | 0.762 µs ( 24 dots ) |
| V | f V | 59.9393 Hz | 70.0849 Hz | 72.8088 Hz |
| | A - PERIOD | 16.684 ms ( 525 lines ) | 14.268 ms ( 449 lines ) | 13.735 ms ( 520 lines ) |
| | B - BLANKING TIME | 1.430 ms ( 45 lines ) | 1.557 ms ( 49 lines ) | 1.057 ms ( 40 lines ) |
| | C - SYNC WIDTH | 0.064 ms ( 2 lines ) | 0.064 ms ( 2 lines ) | 0.079 ms ( 3 lines ) |
| | D - BACK PORCH | 1.049 ms ( 33 lines ) | 1.112 ms ( 35 lines ) | 0.740 ms ( 28 lines ) |
| | E - ACTIVE TIME | 15.254 ms ( 480 lines ) | 12.711 ms ( 400 lines ) | 12.678 ms ( 480 lines ) |
| | F - FRONT PORCH | 0.318 ms ( 10 lines ) | 0.381 ms ( 12 lines ) | 0.238 ms ( 9 lines ) |
| SYNC POLARITY(H/V) | | Negative / Negative | Negative / Positive | Negative / Negative |

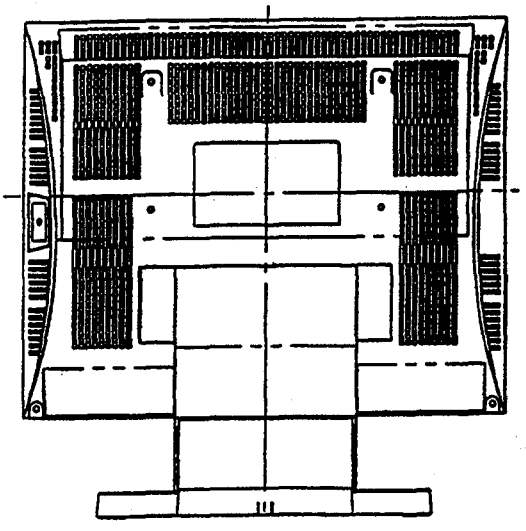
| | | RESERVATION MODE - 4 | RESERVATION MODE - 5 | RESERVATION MODE - 6 |
|---|---|---|---|---|
| | | 640 × 480 (67) | 640 × 480 (75) | 800 × 600 (56) |
| DOT CLOCK | | 30.2410 MHz | 31.5000 MHz | 36.0000 MHz |
| H | f H | 35.0012 kHz | 37.5000 kHz | 35.1563 kHz |
| | A - PERIOD | 28.570 µs ( 864 dots ) | 26.667 µs ( 840 dots ) | 28.444 µs ( 1,024 dots ) |
| | B - BLANKING TIME | 7.407 µs ( 224 dots ) | 6.349 µs ( 200 dots ) | 6.222 µs ( 224 dots ) |
| | C - SYNC WIDTH | 2.083 µs ( 63 dots ) | 2.032 µs ( 64 dots ) | 2.000 µs ( 72 dots ) |
| | D - BACK PORCH | 3.241 µs ( 98 dots ) | 3.810 µs ( 120 dots ) | 3.556 µs ( 128 dots ) |
| | E - ACTIVE TIME | 21.163 µs ( 640 dots ) | 20.317 µs ( 640 dots ) | 22.222 µs ( 800 dots ) |
| | F - FRONT PORCH | 2.083 µs ( 63 dots ) | 0.508 µs ( 16 dots ) | 0.667 µs ( 24 dots ) |
| V | f V | 66.6689 Hz | 75.0000 Hz | 56.2500 Hz |
| | A - PERIOD | 15.000 ms ( 525 lines ) | 13.333 ms ( 500 lines ) | 17.778 ms ( 625 lines ) |
| | B - BLANKING TIME | 1.286 ms ( 45 lines ) | 0.533 ms ( 20 lines ) | 0.711 ms ( 25 lines ) |
| | C - SYNC WIDTH | 0.086 ms ( 3 lines ) | 0.080 ms ( 3 lines ) | 0.057 ms ( 2 lines ) |
| | D - BACK PORCH | 1.114 ms ( 39 lines ) | 0.427 ms ( 16 lines ) | 0.626 ms ( 22 lines ) |
| | E - ACTIVE TIME | 13.714 ms ( 480 lines ) | 12.800 ms ( 480 lines ) | 17.067 ms ( 600 lines ) |
| | F - FRONT PORCH | 0.086 ms ( 3 lines ) | 0.027 ms ( 1 lines ) | 0.028 ms ( 1 lines ) |
| SYNC POLARITY(H/V) | | Negative / Negative | Negative / Negative | Positive / Positive |

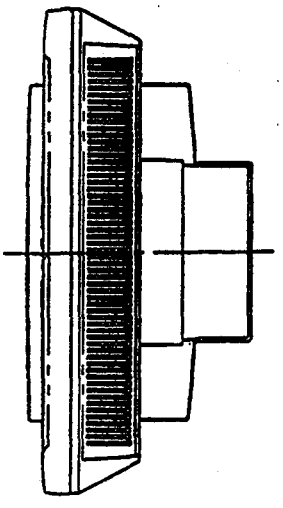
| | | RESERVATION MODE - 7 | RESERVATION MODE - 8 | RESERVATION MODE - 9 |
|---|---|---|---|---|
| | | 800 × 600 (60) | 800 × 600 (75) | 800 × 600 (72) |
| DOT CLOCK | | 40.0000 MHz | 49.5000 MHz | 50.0000 MHz |
| H | f H | 37.8788 kHz | 46.8750 kHz | 48.0769 kHz |
| | A - PERIOD | 26.400 µs ( 1,056 dots ) | 21.333 µs ( 1,056 dots ) | 20.800 µs ( 1,040 dots ) |
| | B - BLANKING TIME | 6.400 µs ( 256 dots ) | 5.172 µs ( 256 dots ) | 4.800 µs ( 240 dots ) |
| | C - SYNC WIDTH | 3.200 µs ( 128 dots ) | 1.616 µs ( 80 dots ) | 2.400 µs ( 120 dots ) |
| | D - BACK PORCH | 2.200 µs ( 88 dots ) | 3.232 µs ( 160 dots ) | 1.280 µs ( 64 dots ) |
| | E - ACTIVE TIME | 20.000 µs ( 800 dots ) | 16.162 µs ( 800 dots ) | 16.000 µs ( 800 dots ) |
| | F - FRONT PORCH | 1.000 µs ( 40 dots ) | 0.323 µs ( 16 dots ) | 1.120 µs ( 56 dots ) |
| V | f V | 60.3165 Hz | 75.0000 Hz | 72.1876 Hz |
| | A - PERIOD | 16.579 ms ( 628 lines ) | 13.333 ms ( 625 lines ) | 13.853 ms ( 666 lines ) |
| | B - BLANKING TIME | 0.739 ms ( 28 lines ) | 0.533 ms ( 25 lines ) | 1.373 ms ( 66 lines ) |
| | C - SYNC WIDTH | 0.106 ms ( 4 lines ) | 0.064 ms ( 3 lines ) | 0.125 ms ( 6 lines ) |
| | D - BACK PORCH | 0.607 ms ( 23 lines ) | 0.448 ms ( 21 lines ) | 0.478 ms ( 23 lines ) |
| | E - ACTIVE TIME | 15.840 ms ( 600 lines ) | 12.800 ms ( 600 lines ) | 12.480 ms ( 600 lines ) |
| | F - FRONT PORCH | 0.026 ms ( 1 lines ) | 0.021 ms ( 1 lines ) | 0.770 ms ( 37 lines ) |
| SYNC POLARITY(H/V) | | Positive / Positive | Positive / Positive | Positive / Positive |

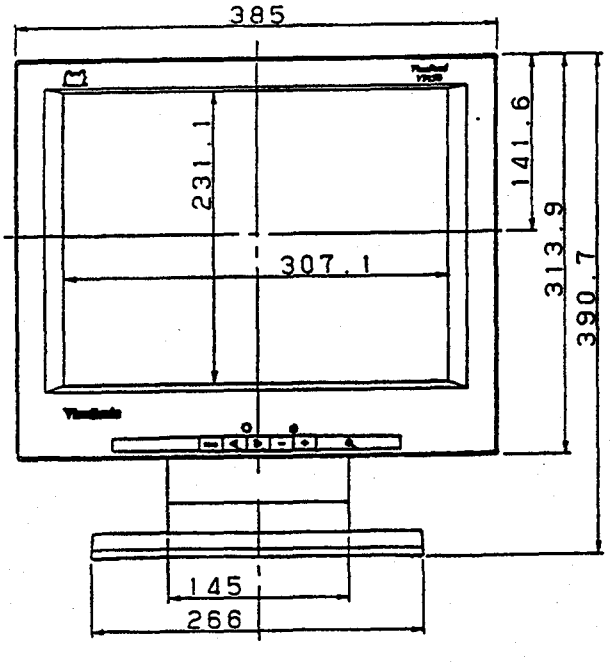
| | | RESERVATION MODE - 10 | RESERVATION MODE - 11 | RESERVATION MODE - 12 |
|---|---|---|---|---|
| | | 832 × 624 (75) | 1024 × 768 (60) | 1024 × 768 (70) |
| DOT CLOCK | | 57.2832 MHz | 65.0000 MHz | 75.0000 MHz |
| H | f H | 49.7250 kHz | 48.3631 kHz | 56.4759 kHz |
| | A - PERIOD | 20.111 µs ( 1,152 dots ) | 20.677 µs ( 1,344 dots ) | 17.707 µs ( 1,328 dots ) |
| | B - BLANKING TIME | 5.586 µs ( 320 dots ) | 4.923 µs ( 320 dots ) | 4.053 µs ( 304 dots ) |
| | C - SYNC WIDTH | 1.117 µs ( 64 dots ) | 2.092 µs ( 136 dots ) | 1.813 µs ( 136 dots ) |
| | D - BACK PORCH | 3.910 µs ( 224 dots ) | 2.462 µs ( 160 dots ) | 1.920 µs ( 144 dots ) |
| | E - ACTIVE TIME | 14.524 µs ( 832 dots ) | 15.754 µs ( 1,024 dots ) | 13.653 µs ( 1,024 dots ) |
| | F - FRONT PORCH | 0.559 µs ( 32 dots ) | 0.369 µs ( 24 dots ) | 0.320 µs ( 24 dots ) |
| V | f V | 74.5502 Hz | 60.0038 Hz | 70.0694 Hz |
| | A - PERIOD | 13.414 ms ( 667 lines ) | 16.666 ms ( 806 lines ) | 14.272 ms ( 806 lines ) |
| | B - BLANKING TIME | 0.865 ms ( 43 lines ) | 0.786 ms ( 38 lines ) | 0.673 ms ( 38 lines ) |
| | C - SYNC WIDTH | 0.060 ms ( 3 lines ) | 0.124 ms ( 6 lines ) | 0.106 ms ( 6 lines ) |
| | D - BACK PORCH | 0.784 ms ( 39 lines ) | 0.600 ms ( 29 lines ) | 0.513 ms ( 29 lines ) |
| | E - ACTIVE TIME | 12.549 ms ( 624 lines ) | 15.880 ms ( 768 lines ) | 13.599 ms ( 768 lines ) |
| | F - FRONT PORCH | 0.020 ms ( 1 lines ) | 0.062 ms ( 3 lines ) | 0.053 ms ( 3 lines ) |
| SYNC POLARITY(H/V) | | Negative / Negative | Negative / Negative | Negative / Negative |

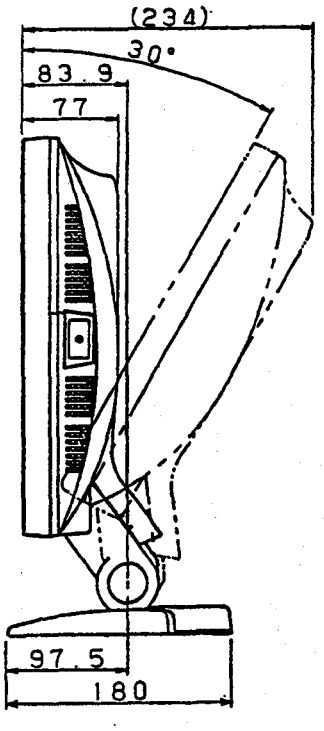
| | | RESERVATION MODE - 13 | RESERVATION MODE - 14 | RESERVATION MODE - 15 |
|---|---|---|---|---|
| | | 1024 × 768 (72) | 1024 × 768 (75) | 1024 × 768 (75) |
| DOT CLOCK | | 75.0000 MHz | 78.7500 MHz | 80.0000 MHz |
| H | f H | 57.8704 kHz | 60.0229 kHz | 60.2410 kHz |
| | A - PERIOD | 17.280 µs ( 1,296 dots ) | 16.660 µs ( 1,312 dots ) | 16.600 µs ( 1,328 dots ) |
| | B - BLANKING TIME | 3.627 µs ( 272 dots ) | 3.657 µs ( 288 dots ) | 3.800 µs ( 304 dots ) |
| | C - SYNC WIDTH | 1.920 µs ( 144 dots ) | 1.219 µs ( 96 dots ) | 1.200 µs ( 96 dots ) |
| | D - BACK PORCH | 1.387 µs ( 104 dots ) | 2.235 µs ( 176 dots ) | 2.200 µs ( 176 dots ) |
| | E - ACTIVE TIME | 13.653 µs ( 1,024 dots ) | 13.003 µs ( 1,024 dots ) | 12.800 µs ( 1,024 dots ) |
| | F - FRONT PORCH | 0.320 µs ( 24 dots ) | 0.203 µs ( 16 dots ) | 0.400 µs ( 32 dots ) |
| V | f V | 71.7995 Hz | 75.0286 Hz | 75.3012 Hz |
| | A - PERIOD | 13.928 ms ( 806 lines ) | 13.328 ms ( 800 lines ) | 13.280 ms ( 800 lines ) |
| | B - BLANKING TIME | 0.657 ms ( 38 lines ) | 0.533 ms ( 32 lines ) | 0.598 ms ( 36 lines ) |
| | C - SYNC WIDTH | 0.104 ms ( 6 lines ) | 0.050 ms ( 3 lines ) | 0.050 ms ( 3 lines ) |
| | D - BACK PORCH | 0.501 ms ( 29 lines ) | 0.466 ms ( 28 lines ) | 0.498 ms ( 30 lines ) |
| | E - ACTIVE TIME | 13.271 ms ( 768 lines ) | 12.795 ms ( 768 lines ) | 12.749 ms ( 768 lines ) |
| | F - FRONT PORCH | 0.052 ms ( 3 lines ) | 0.017 ms ( 1 lines ) | 0.050 ms ( 3 lines ) |
| SYNC POLARITY(H/V) | | Negative / Negative | Positive / Positive | Negative / Negative |

# DIMENSIONS





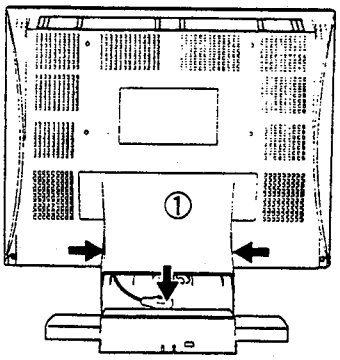


# DISASSEMBLY INSTRUCTIONS

## 1. Rear Cable Cover

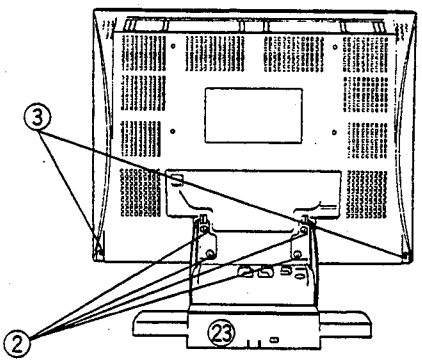
- Push to open. ①




## 2. Tilt Base removal

*Note: Spread a mat underneath damaging the LCD surface.*

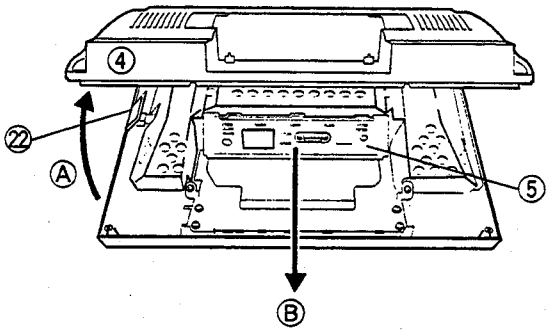
1) Remove 4 screws.②
2) Remove tilt base ㉓ from monitor.
3) Remove 2 screws.③




## 3. Rear Cover and Terminal Caver

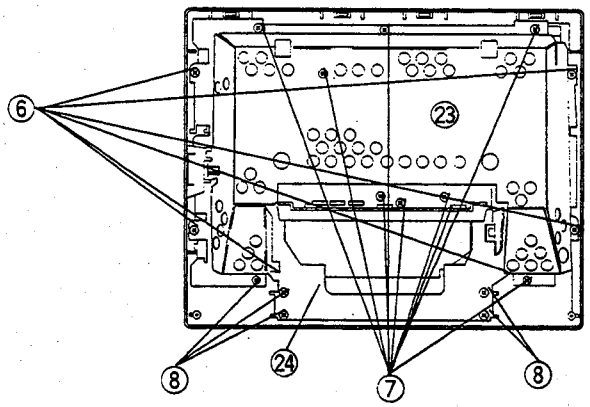
- Lift up the Rear Cover.

1) Remove the rear cover.④ Ⓐ
2) Remove terminal cover.⑤ Ⓑ
3) Remove power switch cover and knob.㉒

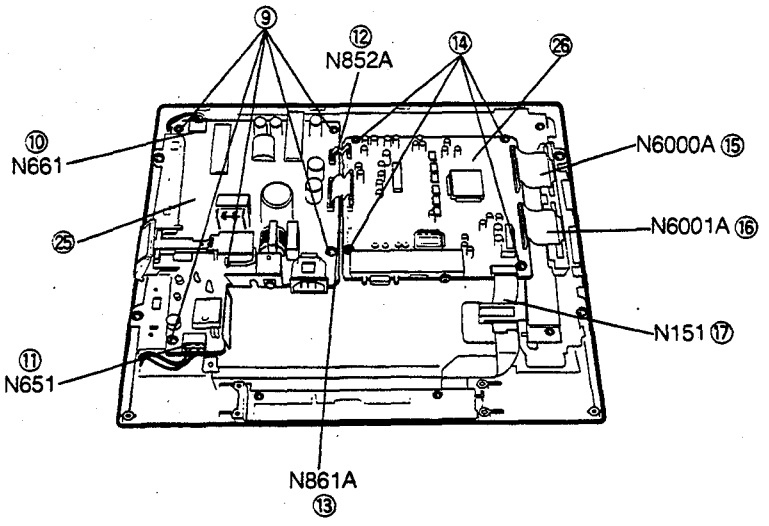



## 4. Shield Case removal.

1) Remove 6 screws.⑥
2) Remove 9 screws.⑦
3) Remove shield case.㉓
4) Remove 5 screws.⑧
5) Remove protector.㉔



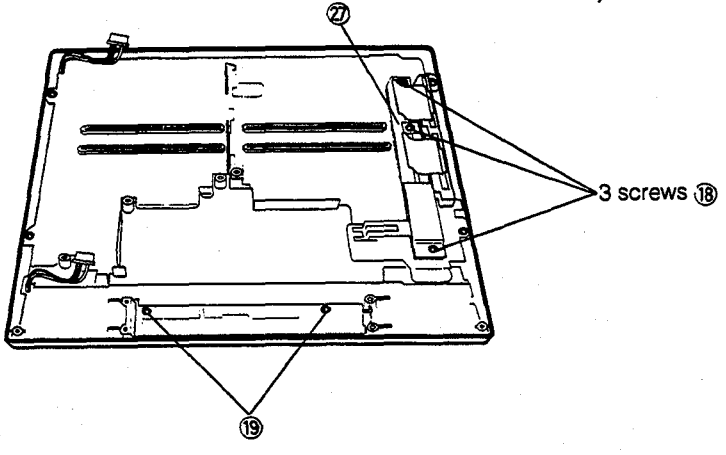
## 5. Power and main PCB Removal




1) Remove 5 screws.⑨
2) Remove N661 ⑩ and N651.⑪
3) Remove N852A ⑫ and N861A.⑬
4) Remove power PCB.㉕
5) Remove 4 screws.⑭
6) Remove N600A ⑮ and N6001A.⑯
7) Remove N151.⑰
3) Remove main PCB.㉖

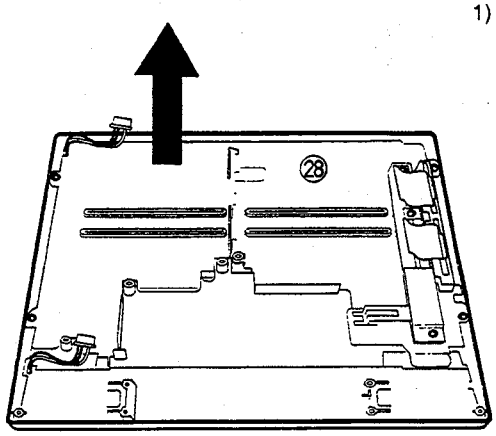
## 6. Conneitor and Audio unit Removal

1) Remove 4 screws.⑲
2) Remove front PCB.
3) Remove 3 screws.⑱
4) Remove connector PCB.㉗



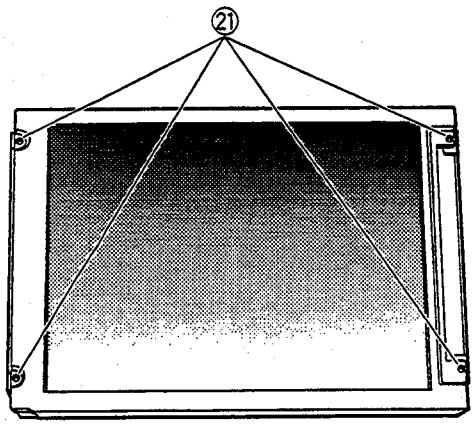
## 7. LCD Panel Removal

1) Remove LCD panel block ㉘ from front cabinet.



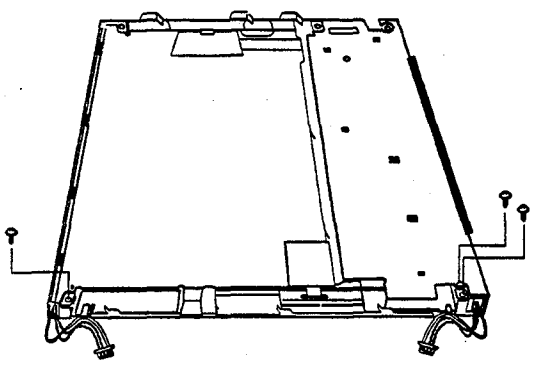

Remove LCD Panel from Front Bezel

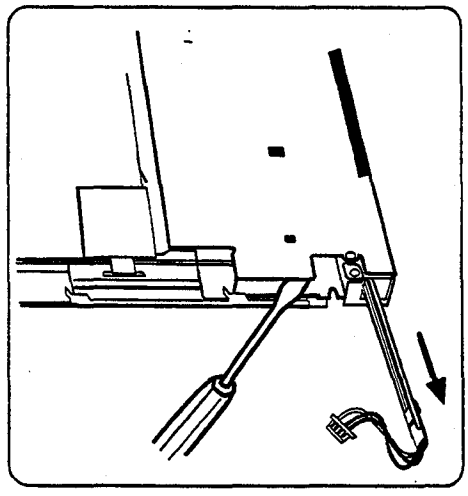
1) Remove 4 screws. ㉑
2) Remove LCD bracket from LCD panel.



## Precautions for Backlight replacement

In replacing the backlight,remove the three screws as shown below,raise the shielding board with a small screwdriver,for example,and pull it out, thereby preventing damage to the backlight itself. After mounting a new backlight in place, fasten it back with the three screws.





# ADJUSTMENT TOOLS

## INTRODUCTION

- This monitor is controlled by a microcomputer. With the exception of purity/convergence/focus all is digitally adjusted.
  Therefore a computer, the dedicated control software, the dedicated interface, a 9~12 V power supply, and a signal generator are required servicing.

## TOOLS REQUIRED

- **Computer**
  The control software is IBM PC compatible only. Therefore, it is not compatible with any other operating systems. For further information please contact **our sales office.**

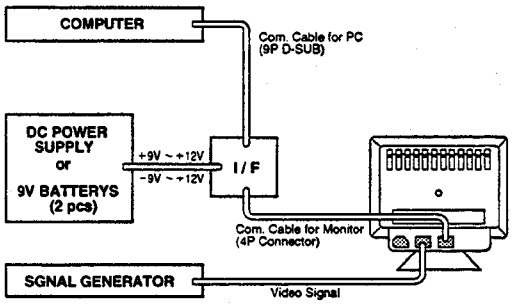
- **Control Software**
  The **VP150** can only use "VP150" adjustment program disk". No other program can access the EEPROM on the monitor. For further information please contact **our sales office.**

- **Interface**
  The interface is dedicated to work only with the control software and the **VP150** chassis. There are no substitutes for this interface. For further information please contact **our sales office.**

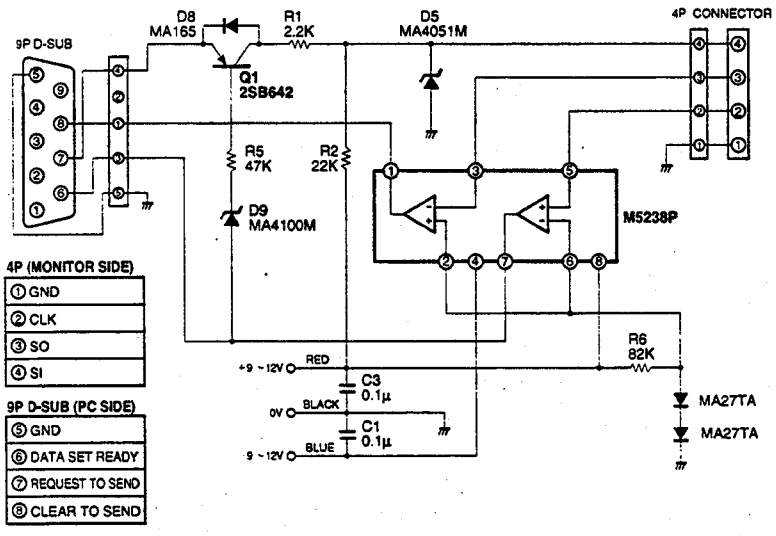
- **Power Supply**
  A DC 9~12 V (+9~12 V/–9~12 V) power supply is required for operating the interface.

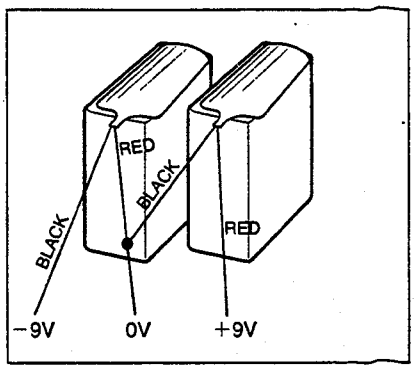
- **Signal Generator**
  It is necessary for you to use a signal generator which operates on fH 61 kHz, fv 77 Hz, and fc 100 MHz bands.

## INTERFACE CONNECTION




## INTERFACE SCHEMATIC DIAGRAM




BATTERY CONNECTION

# ADJUSTMENT PROCEDURE

Note 1 : Check to be sure that the program disk name is **VP150** before making necessary adjustment.
Note 2 : Unless otherwise specified, the monitor state is as given at right.
Note 3 : The underlined places indicate the adjustment items on the screen of the PC.
Note 4 : When using the adjustment software in windows95/98, it should be used in the mode of "MS-DOS prompt only" and not in windows. If it is used in windows, the accuracy of data is not guaranteed.

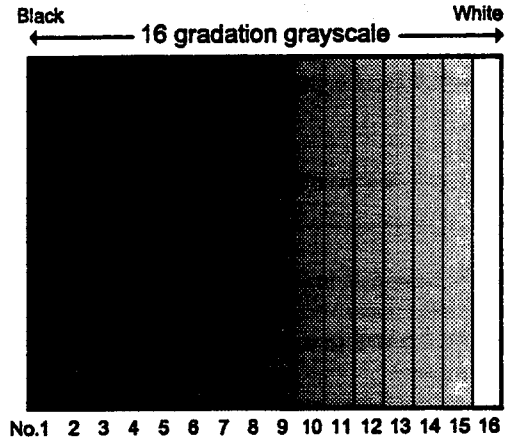
## 1. Description of Adjustment Method

| | ITEM<br>Program Menu | Test Pattern | JOB CODE | Input Signal | Operation |
|---|---|---|---|---|---|
| A | **STANDARD DATA SETTING**<br>1: Load data from FILE | 16 gradation grayscale | A1<br><br>A2<br><br><br>AE | Mode-11 | Set the cell to 1: Load data from FILE and press [↵].<br>A massage<br>**FILE -> EEPROM FILE NAME (q or Q escape) [ ] :**<br>is displayed. So key in the DACDATA.DAT (when using the standard data) and press [↵].<br>Turn off the monitor's power switch and turn on again. |
| B | **WHITE BALANCE DATA SETTING**<br>2: AUTO W-Balance adjust | 16 gradation grayscale | B1<br><br>BE | Mode-11 | Check that the input signal to the monitor is [fH 48.4kHz] and [fV 60.0Hz].<br>Set the cell to the menu of 2: AUTO W-balance adjust on the main menu and press [↵].<br>This messages will appear :<br>**Adjust DATA Writing . Okay ? (y/n)**<br>Press [Y] to return to the main menu. |
| C | **BRIGHT LIMIT DATA SETTING**<br>3: Calculate Bright limi | 16 gradation grayscale | C1<br><br>C2<br><br><br>C4<br><br>CE | Mode-11 | Check that the input signal to the monitor is [fH 48.4kHz] and [fV 60.0Hz].<br>Set the cell to 3: Calculate Bright limi and press [↵].<br>This messages will appear :<br>**Calculate BRIGHTNESS (A/D) data automatically . OK (y/n) ?**<br>Press [Y].<br>**Finished . (Hit return key)**<br>Press [↵] to return to the main menu. |
| D | **COLOR 2 AND 3 DATA SETTING**<br>4: CALCULATE COLOR <2>/U | 16 gradation grayscale | D1<br><br>D2<br><br><br>D4<br><br>D5<br><br>DE | Mode-11 | Check that the input signal to the monitor is [fH 48.4kHz] and [fV 60.0Hz].<br>Set the cell to 4: CALCULATE COLOR <2>/U and press [↵].<br>This messages will appear :<br>**Calculate COLOR-2 data automatically . OK (y/n) ?**<br>Press [Y].<br>**Calculate COLOR-3 data automatically . OK (y/n) ?**<br>Press [Y].<br>**Finished . (Hit return key)**<br>Press [↵] to return to the main menu. |

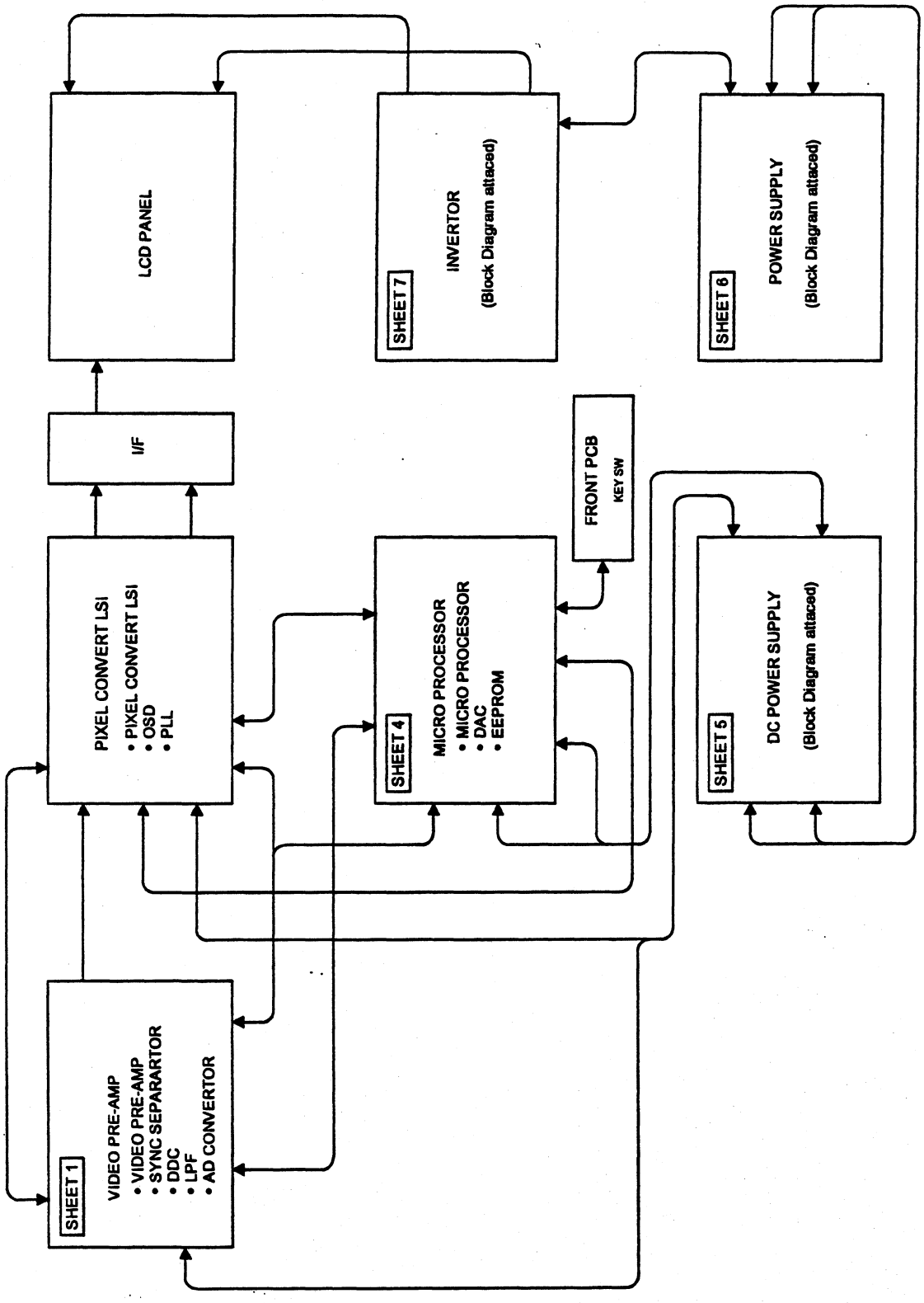
| ITEM Program Menu | | Test Pattern | JOB CODE | Input Signal | Operation |
|---|---|---|---|---|---|
| E | **FINAL TUNE**<br>5: Final tune | 16 gradation grayscale | E1<br><br>E2<br><br><br><br><br><br>E4<br><br><br><br>EE | Mode-11 | Check that the input signal to the monitor is [fH 48.4kHz] and [fV 60.0Hz].<br>Set the cell to 5: Final tune and press [↵].<br>This messages will appear :<br>**Tunimg start !**<br>**<loading EEPROM data> wait a moment ....**<br>**<saving data to EEPROM> wait a moment ....**<br>**Erase all 'User Preset DATA . Okay ? (y/n)**<br>Press [Y] or [N].<br>**Finish !! <SET FLAG> wait a moment ..... end**<br>**Tune end .**<br>**Hit return key !**<br>Press [↵] to return to the main menu. |
| F | **DATA SAVING**<br>6: Save data to file | | F1<br><br><br>F2 | | Set the cell to 6: Save data to file and press [↵].<br>This messages will appear :<br>**EEPROM -> FILE NAME (q or Q escape) [ ] :**<br>Key in the file name.<br>Use serial number as a file name.<br>( EXAMPLE : E881200001= "E881200.001" ) |

To read / write data for DDC, a special jig is required, but this jig is not available yet.
When this jig can be supplied, we will inform in the technical information.

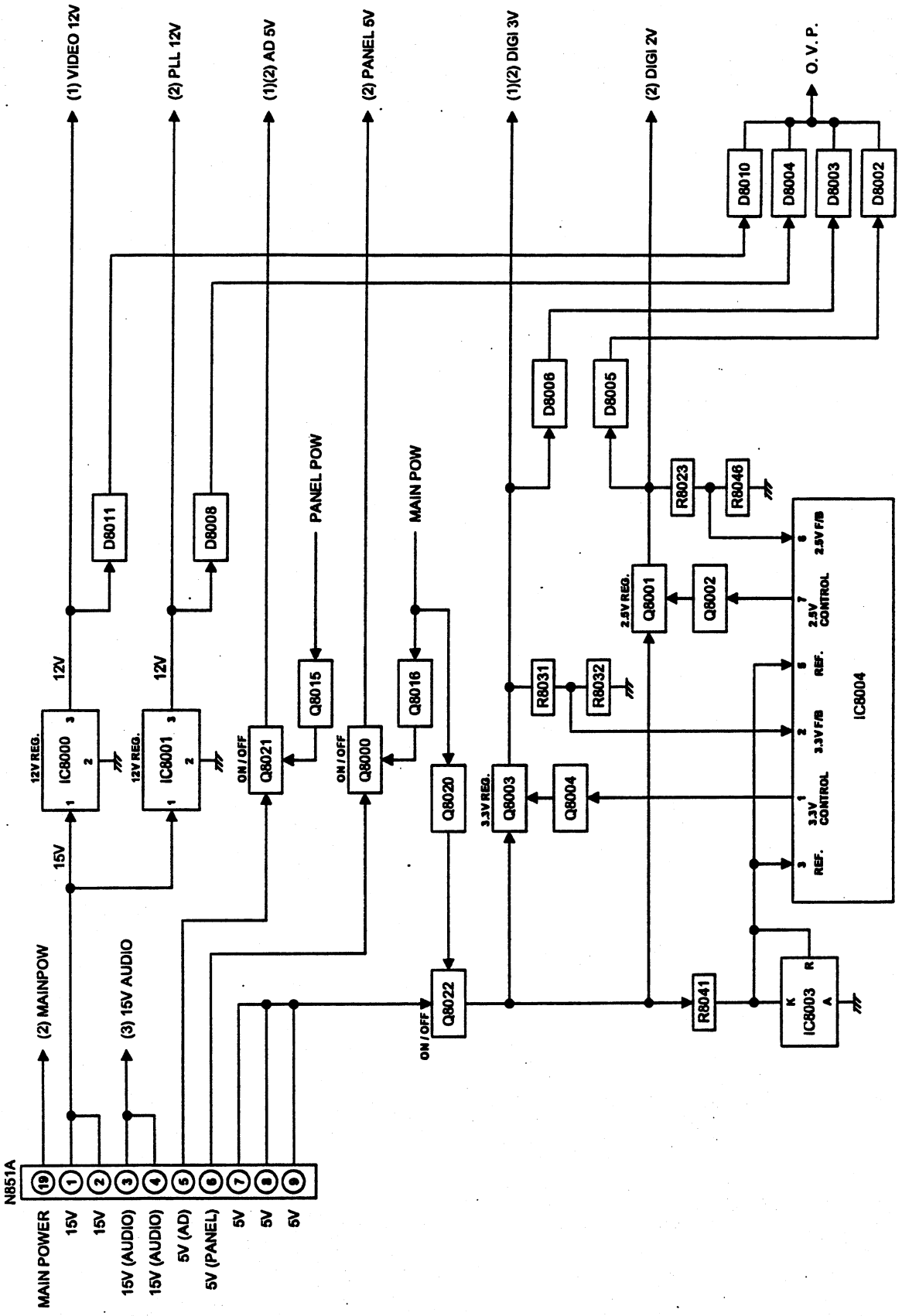
| | ITEM<br>Program Menu | Test Pattern | JOB CODE | Input Signal | Operation |
|---|---|---|---|---|---|
| G | **SCREEN CHECK** | 16 gradation grayscale | G1<br><br>G2 | Mode-11 | Check that the input signal to the monitor is [fH 48.4kHz] and [fV 60.0Hz].<br>To make following condition by using OSD, and check screen.<br><br>(Condition-1)<br>**CONTRAST = MAX**<br>**BRIGHTNESS = CENTER**<br>**BACKLIGHT = MAX**<br>(Spec-1)<br>No.1 is black, and No.2 is gray appears slightly.<br>No.16 is White, and No.15 is darker than No.16<br><br>(Condition-2)<br>**CONTRAST = MAX**<br>**BRIGHTNESS = MIN**<br>**BACKLIGHT = MAX**<br>(Spec-2)<br>No.1,No.2 or No.1,No.2,No.3 is black<br><br>(Condition-3)<br>**CONTRAST = MAX**<br>**BRIGHTNESS = MAX**<br>**BACKLIGHT = MAX**<br>(Spec-3)<br>No.16,No.15 or No.16,No.15,No.14 is white<br><br>If out of spec, to repeat **ITEM B – E.** |
| | **OSD FUNCTION CHECK** | | G3 | | Check to OSD function. |



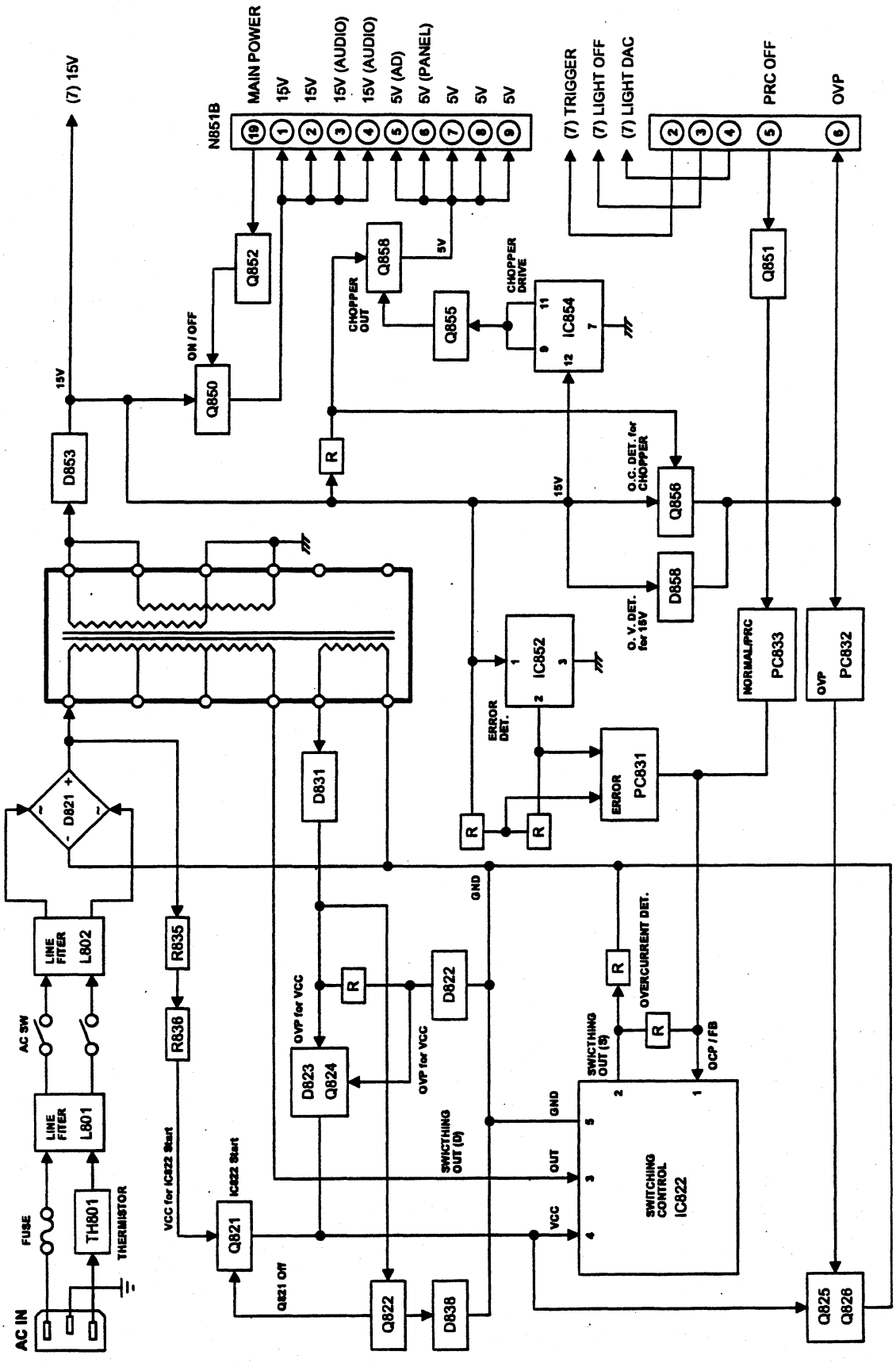
# BLOCK DIAGRAM

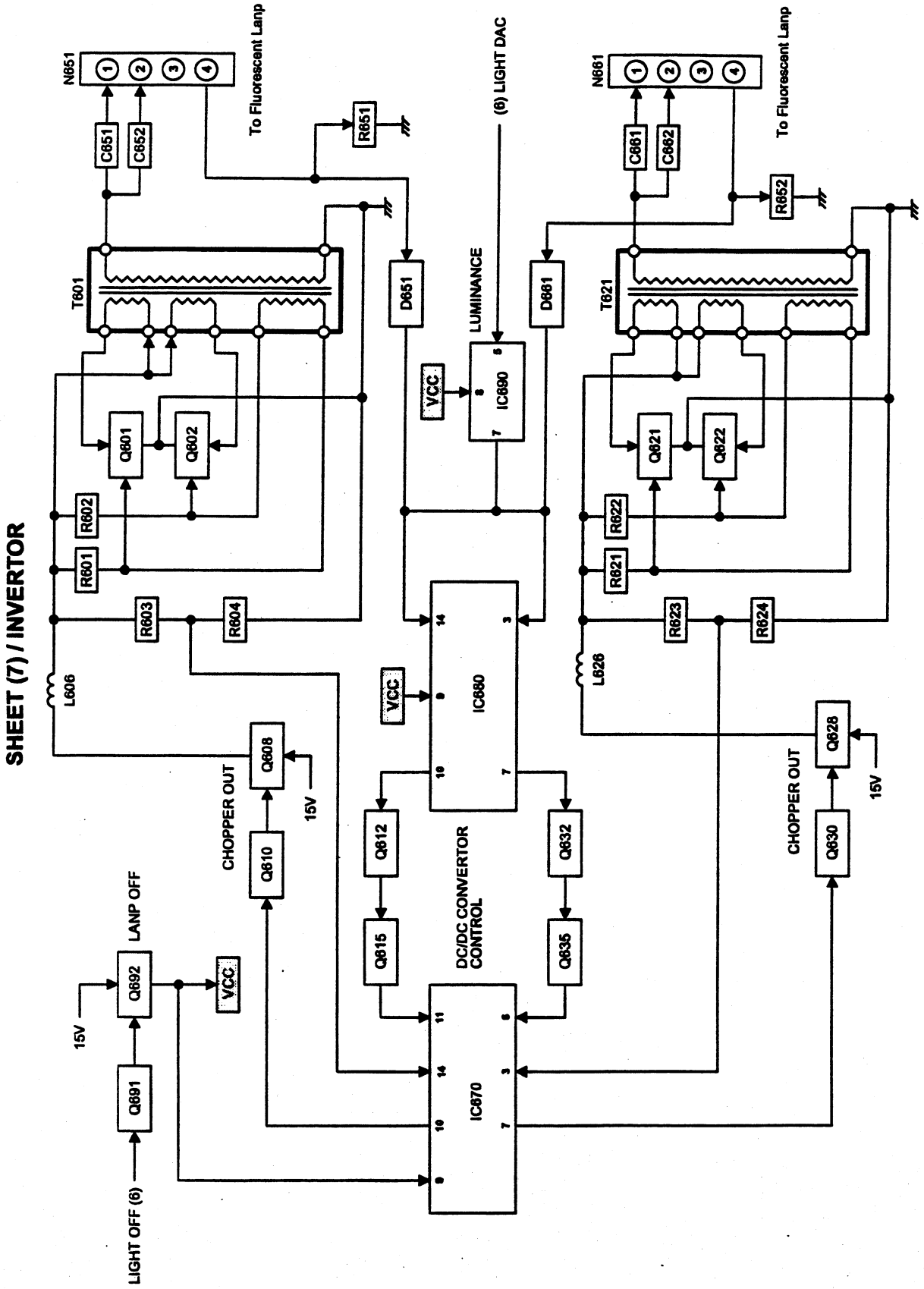


## SHEET (5) / DC POWER SUPPLY

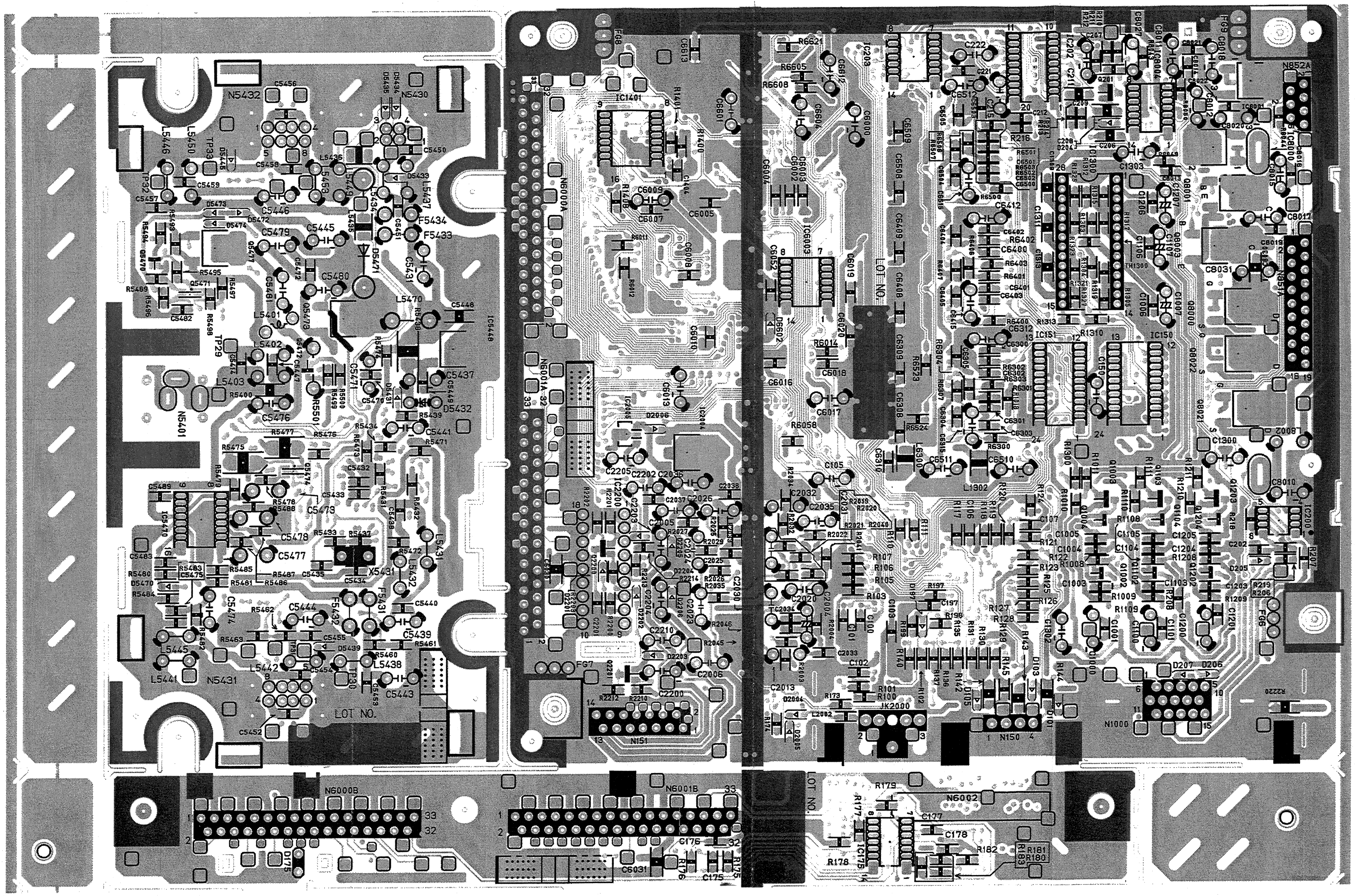


## SHEET (6) / POWER SUPPLY

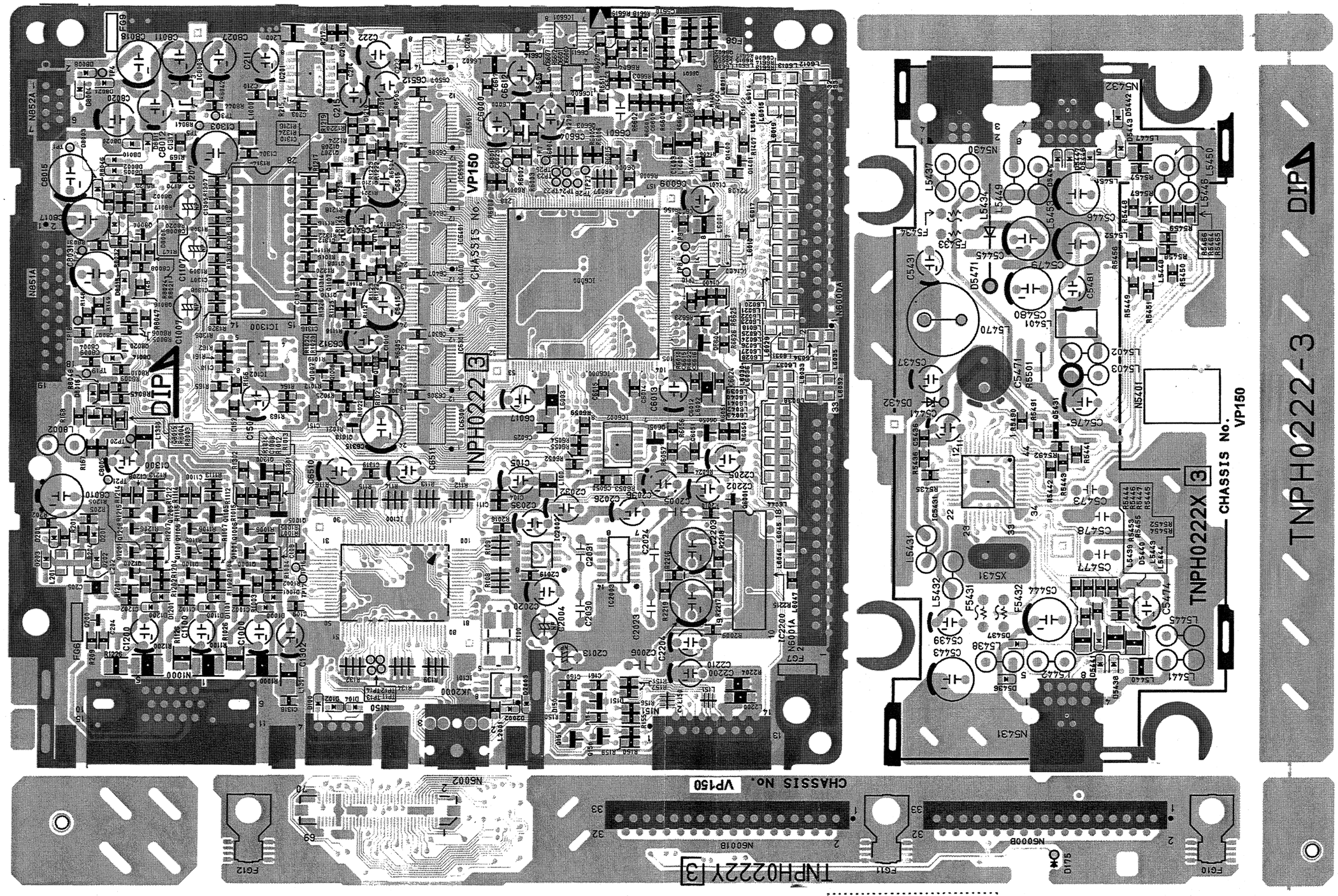



SHEET (7) / INVERTOR
N651
To Fluorescent Lanp
C651
C652
R651
T601
D651
(8) LIGHT DAC
LUMINANCE
D661
N661
To Fluorescent Lanp
C661
C662
R652
T621
VCC
IC690
Q601
Q602
Q621
Q622
R602
R601
R622
R621
R603
R604
R623
R624
L606
L626
VCC
IC680
Q608
CHOPPER OUT
15V
Q628
CHOPPER OUT
15V
Q610
Q612
Q632
Q630
DC/DC CONVERTOR CONTROL
LANP OFF
Q692
VCC
15V
Q615
Q635
Q691
IC670
LIGHT OFF (6)

MAIN PCB (Solder side)



MAIN PCB (Parts side)



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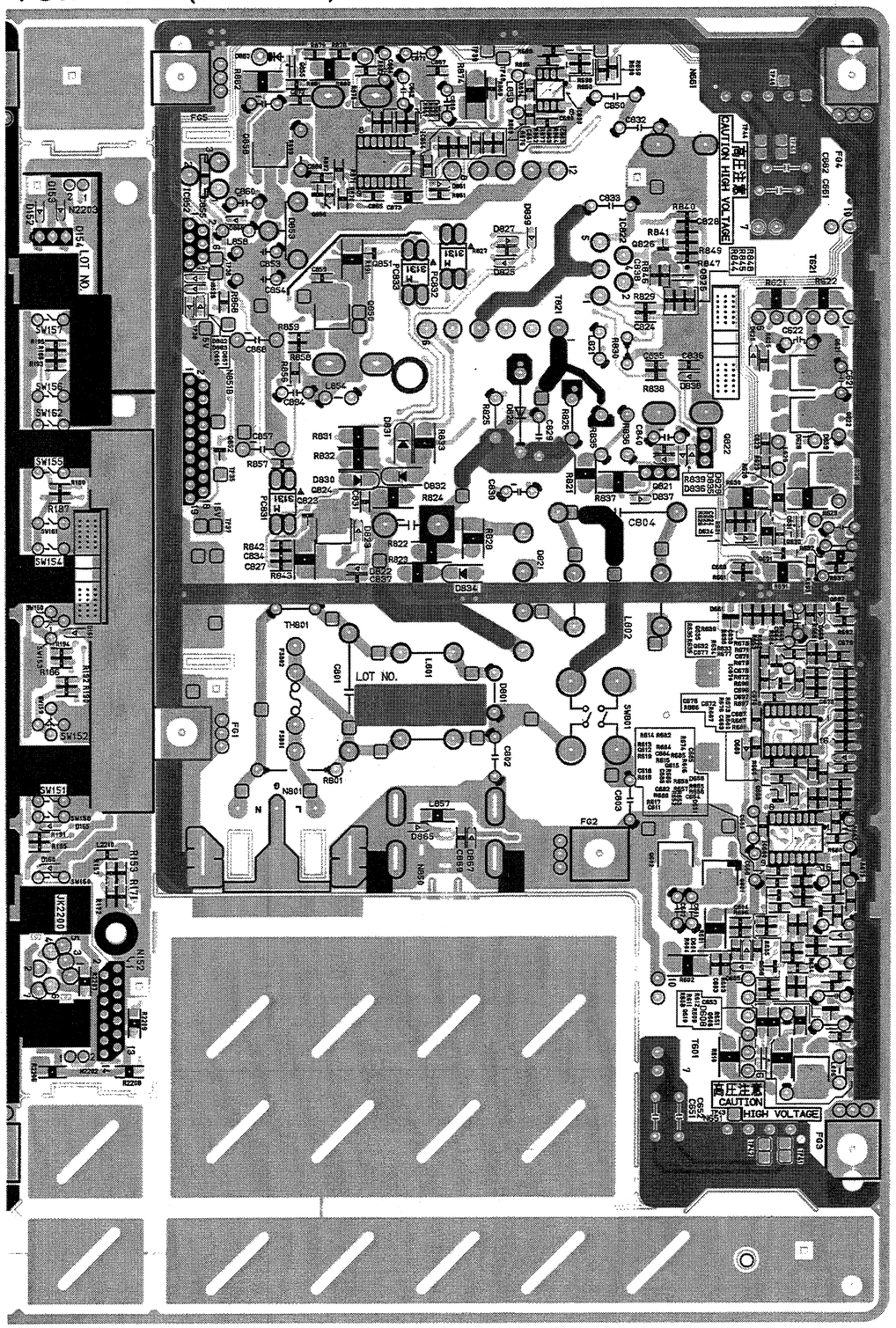
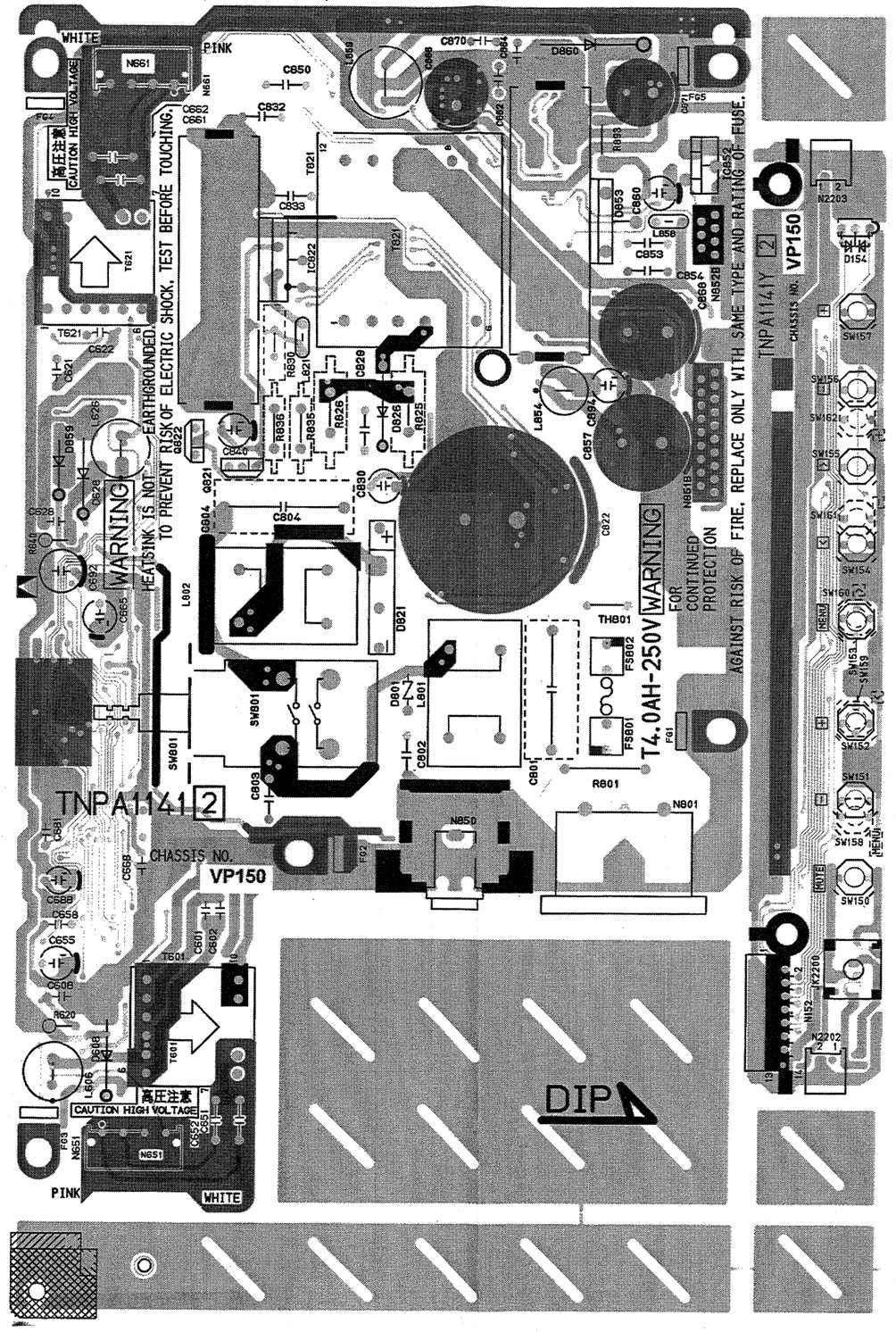
POWER PCB (Solder side)




POWER PCB (Parts side)



# SCHEMATIC DIAGRAM

## IMPORTANT SAFETY NOTICE

The component identified by shading or international symbol ⚠ on the following schematic diagrams incorporate special features important for protection from X-Radiation, fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for those critical components.

## NOTES :

1. **RESISTOR**

   All resistors are carbon 1/4W resistor, unless otherwise noted by the following marks.
   Unit of resistance is ohm (Ω), (K = 1,000, M = 1,000,000)

   - ◯ : Non Flammable
   - ⊠ : Metal Oxide
   - □ : Wire Wound
   - ⊗ : Fusible
   - ⧄ : Flame Proof Rectangular
   - △ : Solid
   - ◎ : Metal (Precision and high stability)
   - : Thermistor
   - : Positive coefficient Thermistor

2. **CAPACITOR**

   All capacitors are ceramic 50V capacitor, unless otherwise noted by the following marks.
   Unit of capacitance is μF, unless otherwise noted.

   - : Electrolytic
   - Ⓣ : Tantalum
   - NP : Bipolar
   - Ⓢ : Polystyrene
   - ⊗ : Temperature Compensation
   - Ⓜ : Polyester
   - ⓜ : Metalized Polyester
   - ⊠ : Polypropylene
   - △ : Mica
   - ◯ : Ceramic
   - ◎ : Ceramic (SL)

3. **COIL**

   Unit of inductance is μH, unless otherwise noted.

4. **VOLTAGE MEASUREMENT**

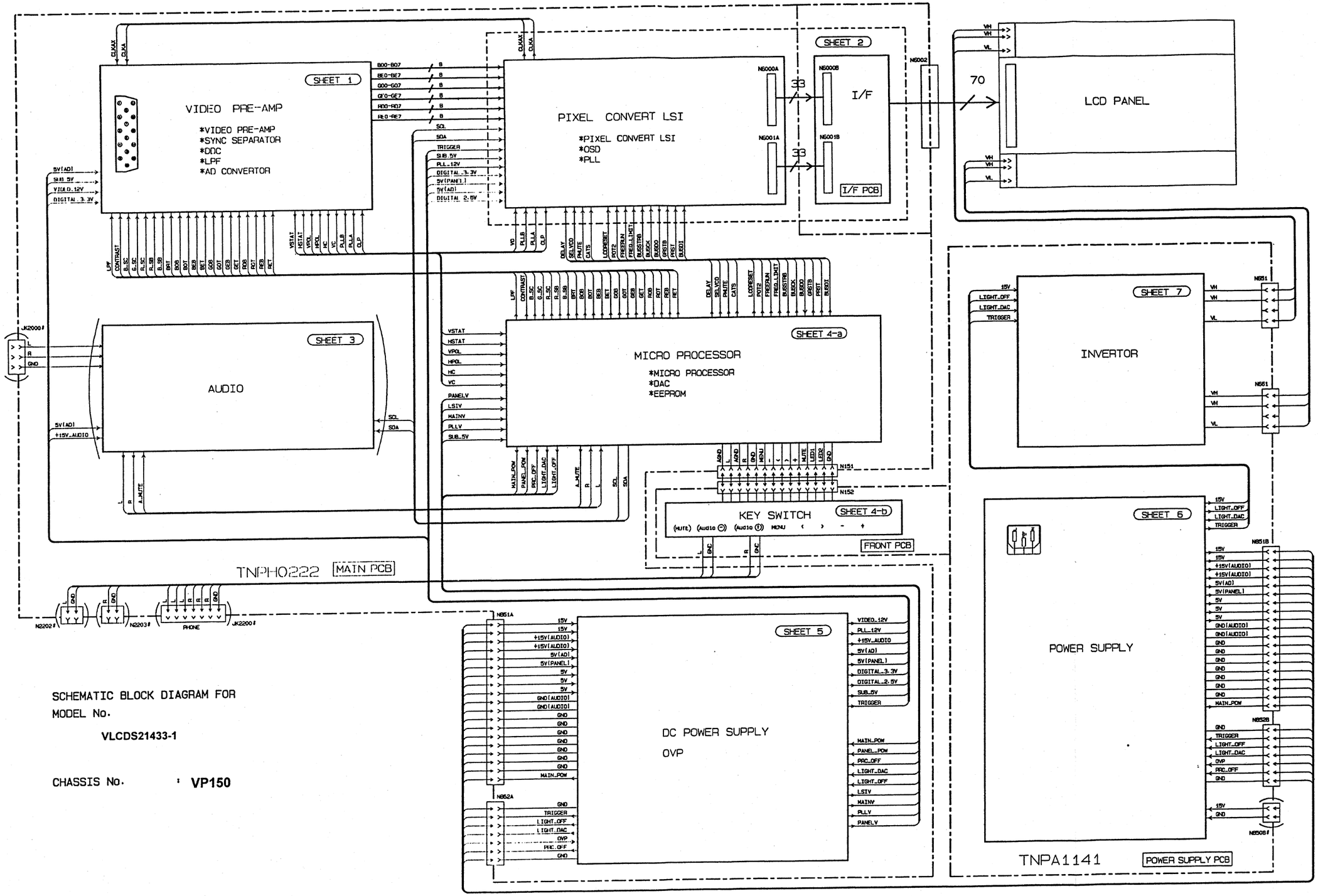
   Voltage is measured by a digital meter receiving normal signal.

5. This schematic diagram is the letest at the time of printing and is subject to change without notice.

## SERVICE NOTES :

This model has a section that does not share a common ground with the power supply section. The different sections are referred to as the HOT section and the COLD section in the precautions below.

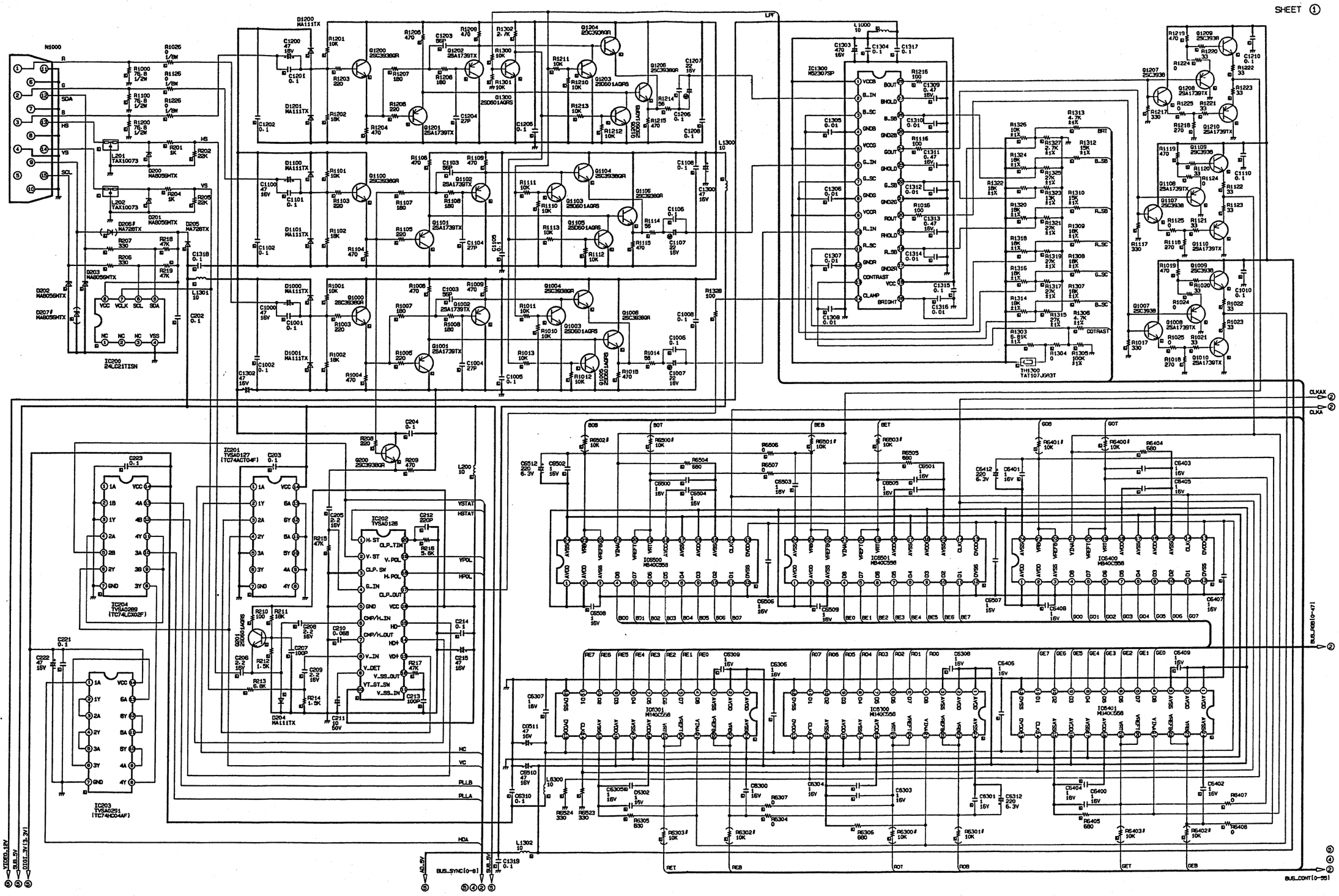
1. Do not touch the HOT section and the COLD section at the same time. You may receive an electric shock.
2. Do not short the HOT section to the COLD section. This could blow the fuse or damage parts.
3. Never measure the HOT section and the COLD section at the same time when using tools such as oscilloscopes or multimeters.
4. Always unplug the unit before beginning any operation such as removing the chassis.




SCHEMATIC BLOCK DIAGRAM FOR
MODEL No.

**VLCDS21433-1**

CHASSIS No. : **VP150**



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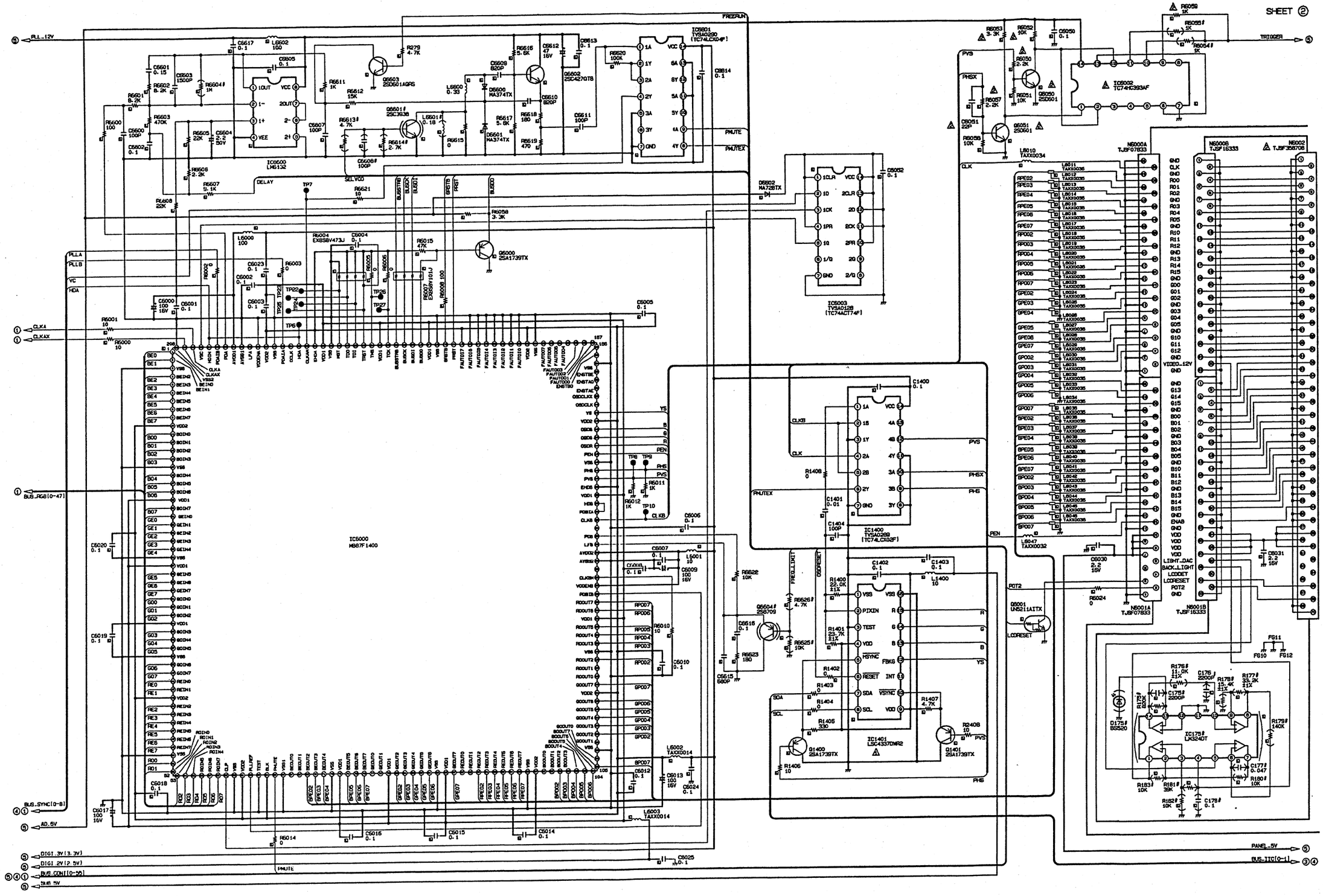




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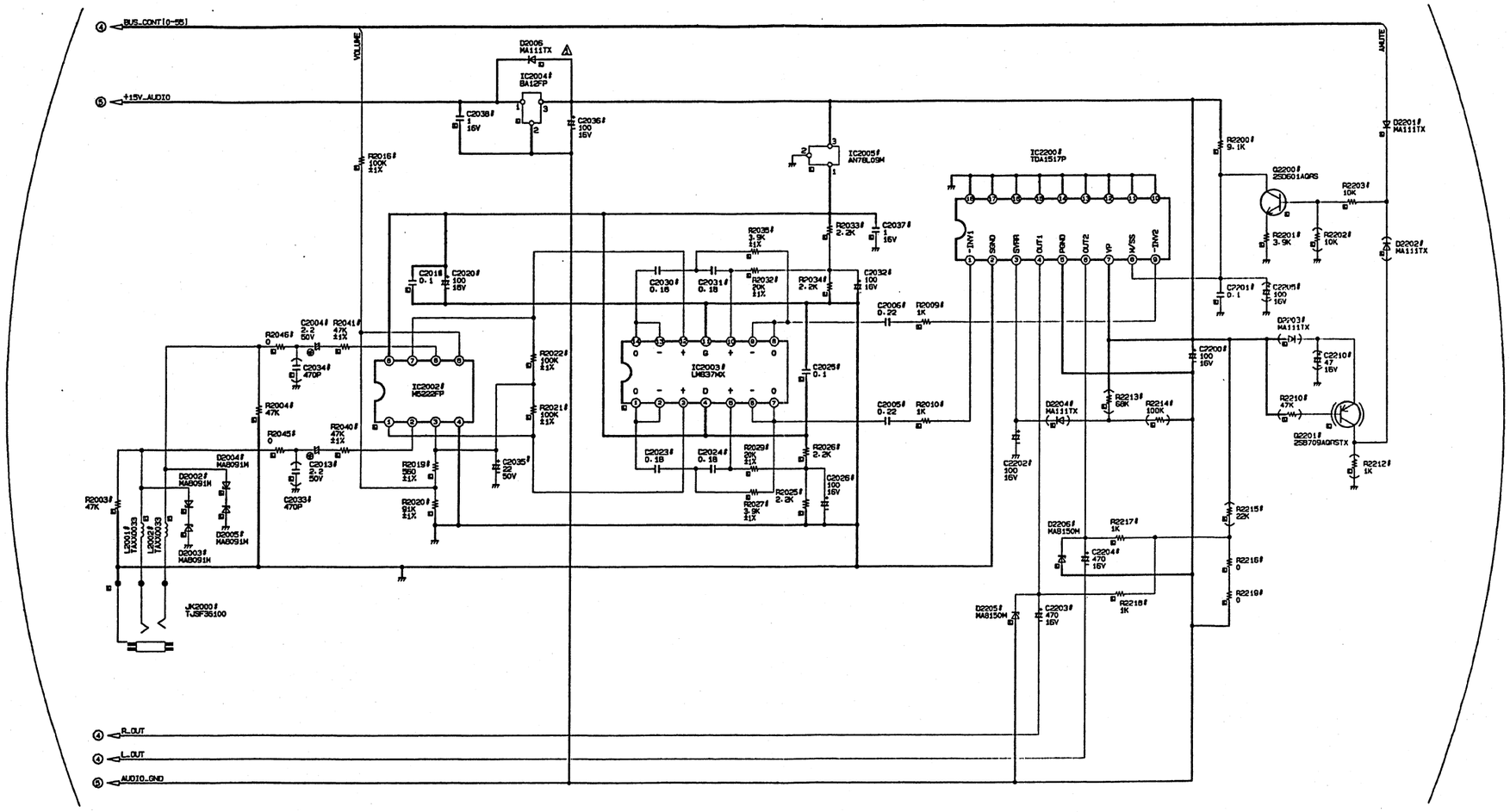
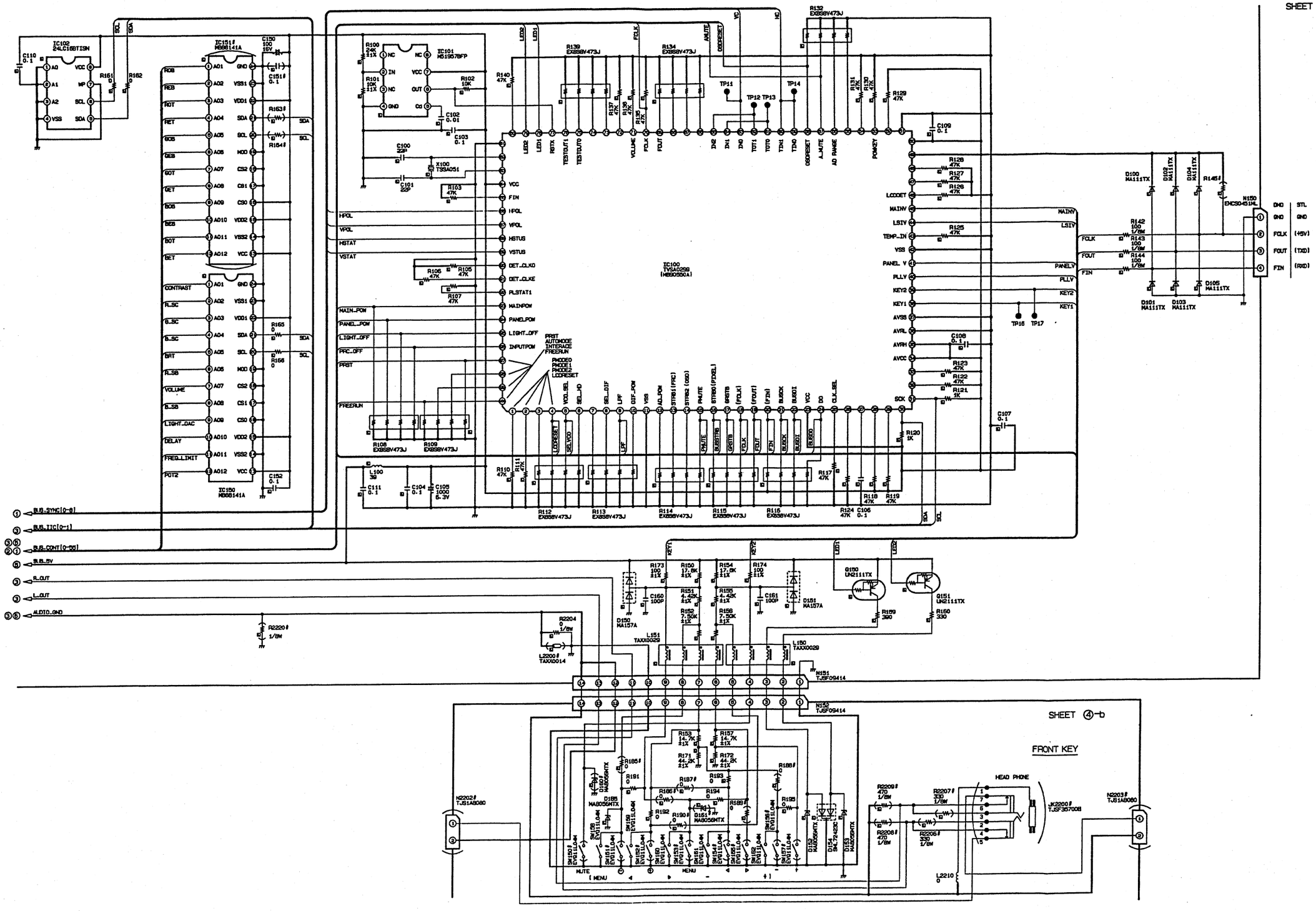
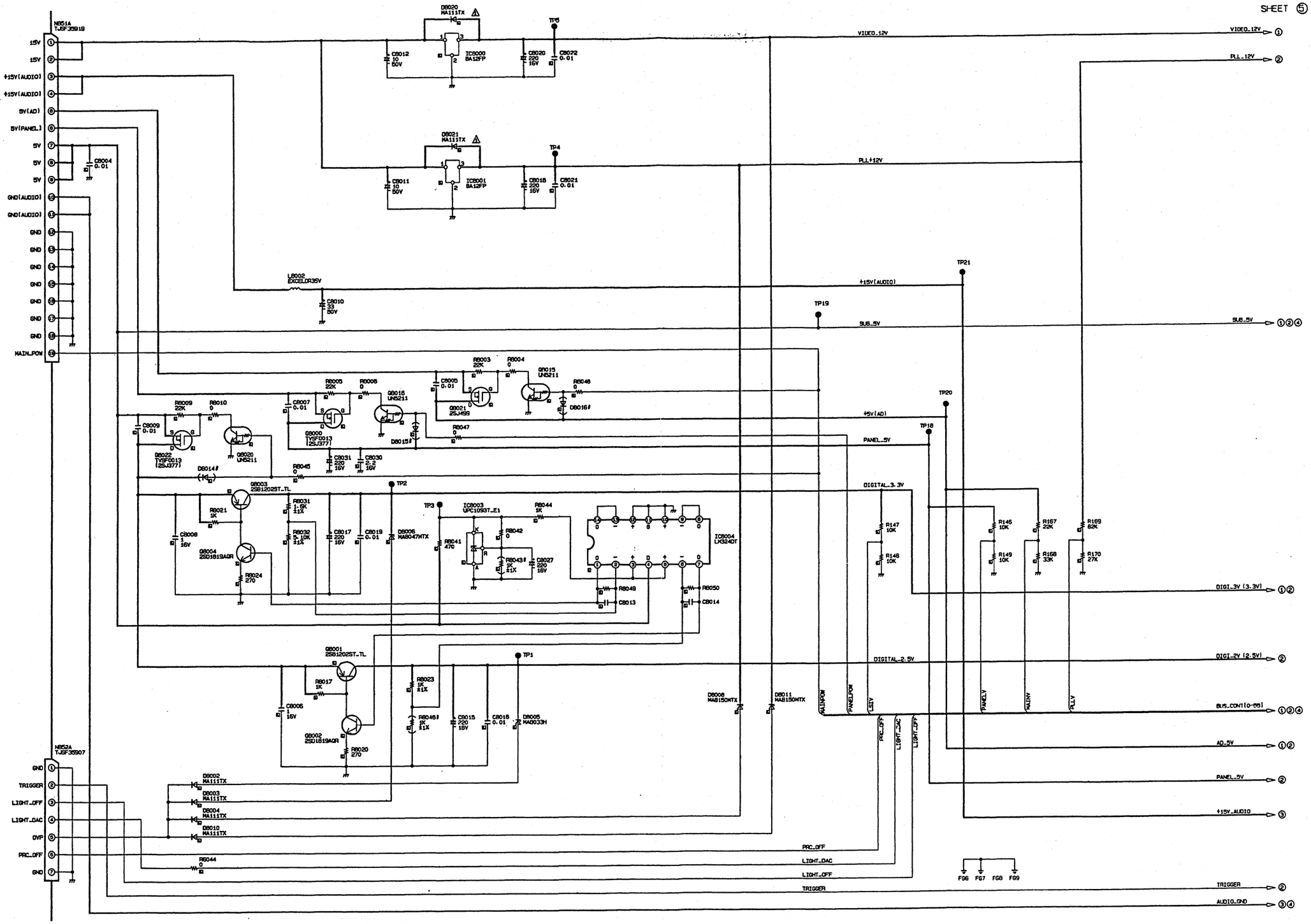
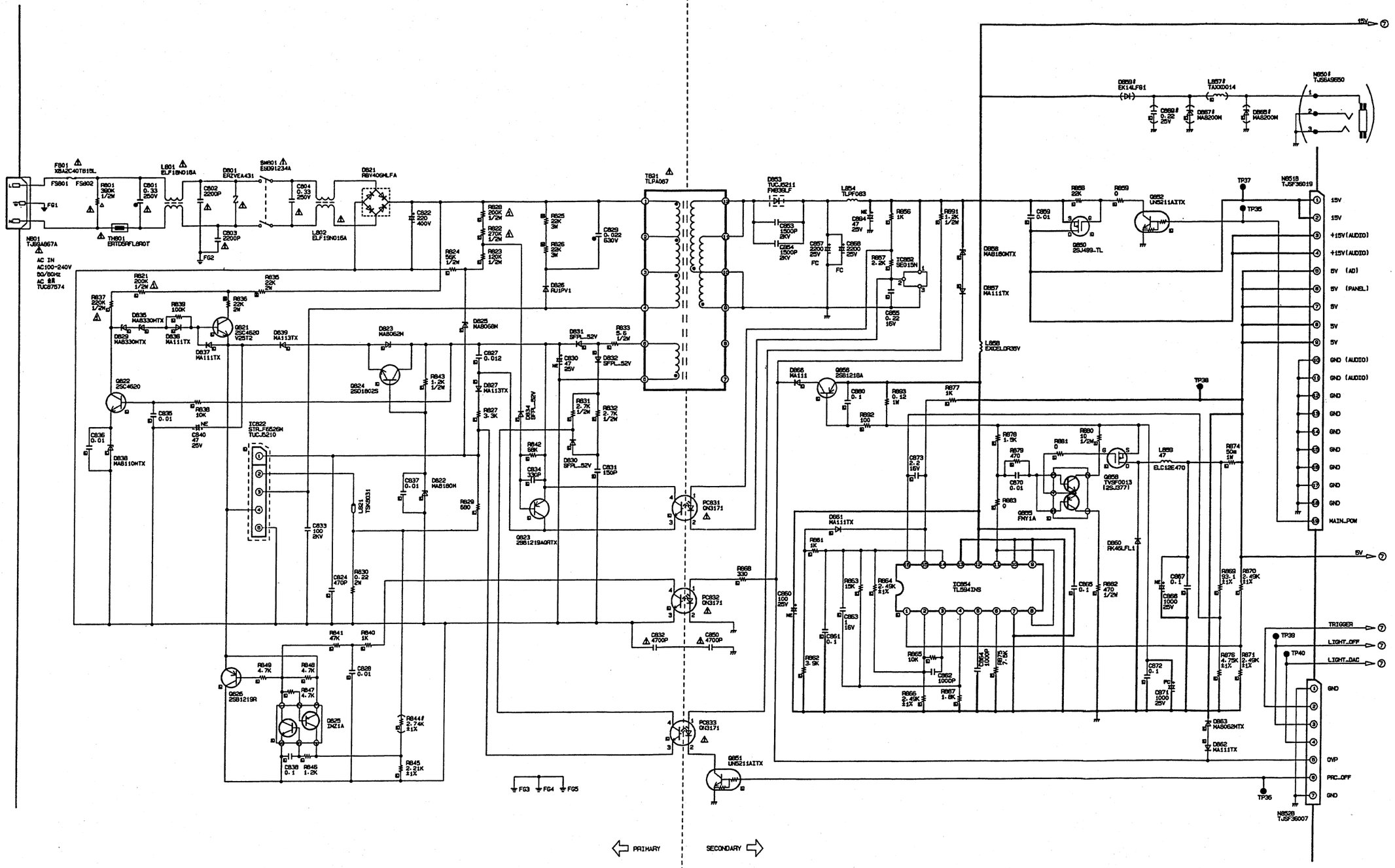
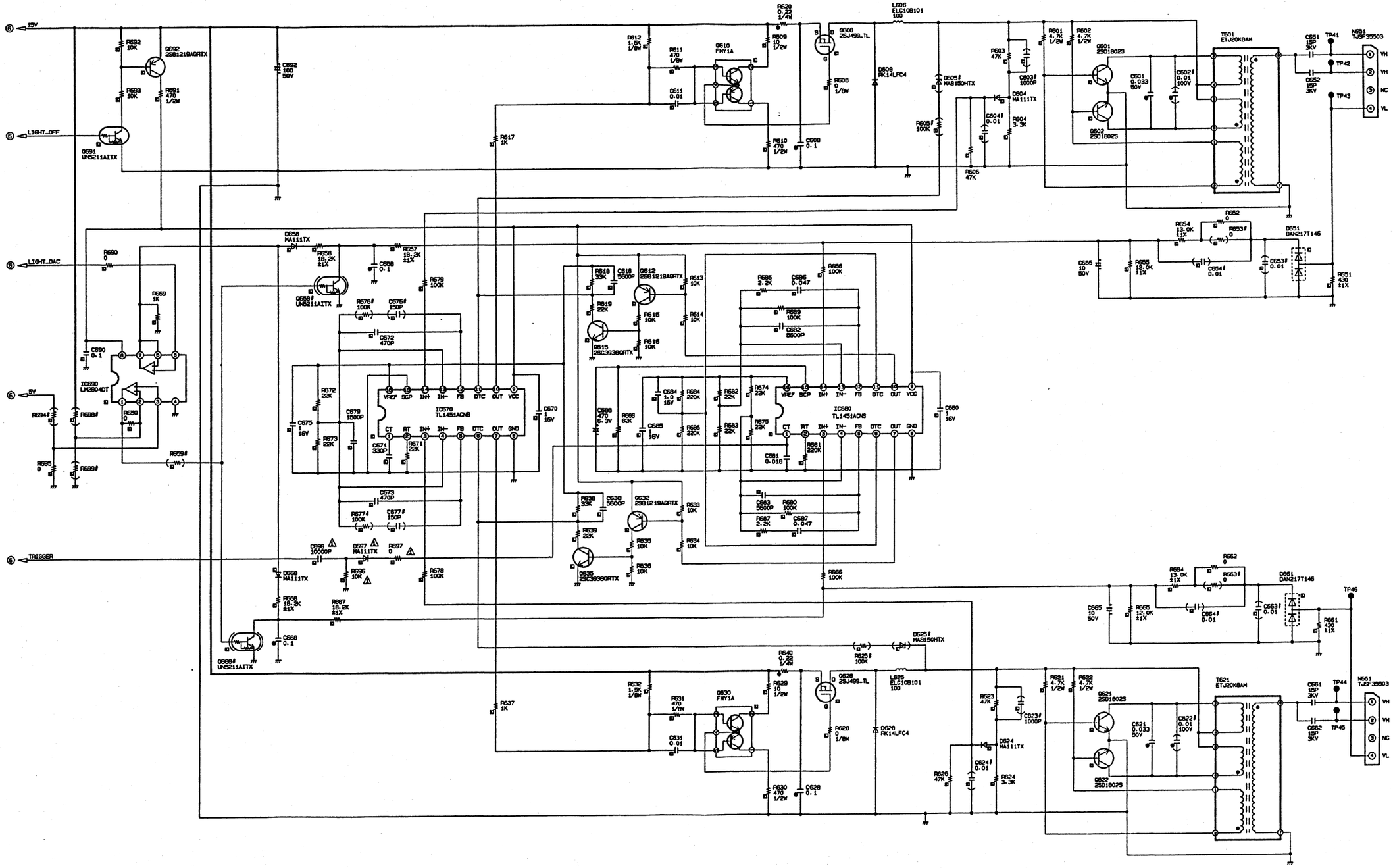

BUS-CONT[0-5]
+15V_AUDIO
VOLUME
MUTE
D2005 MA111TX
IC2004 BA12FP
C2038 1 16V
C2036 100 16V
R2016 100K ±1%
IC2005 AN78L09M
IC2200 TDA1517P
R2200 9.1K
D2201 MA111TX
Q2200 2SD601AQRS
R2203 10K
R2201 3.9K
R2202 10K
D2202 MA111TX
C2035 0.1
R2035 3.9K ±1%
R2033 2.2K
C2037 1 16V
C2201 0.1
C2020 100 16V
C2030 0.18
C2031 0.18
R2032 20K ±1%
RP0034 2.2K
C2032 100 16V
C2006 0.22
R2009 1K
C2701 0.1
C2205 100 16V
D2203 MA111TX
C2004 2.2 50V
R2041 47K ±1%
R2046 0
C2034 470P
IC2002 M5222FP
R2022 100K ±1%
IC2003 LM837MX
C2025 0.1
R2004 47K
R2045 0
R2040 47K ±1%
C2033 470P
C2013 2.2 50V
R2021 100K ±1%
C2005 0.22
R2010 1K
C2200 100 16V
C2210 47 16V
R2210 47K
Q2201 2SB709AQRSTX
R2212 1K
C2023 0.18
C2024 0.18
R2029 20K ±1%
R2026 2.2K
C2026 100 16V
R2025 2.2K
R2027 3.9K ±1%
R2019 180 ±1%
R2020 91K ±1%
C2035 22 50V
C2202 100 16V
D2204 MA111TX
R2213 68K
R2214 100K
R2003 47K
D2002 MA8091M
D2004 MA8091M
D2005 MA8091M
D2003 MA8091M
LR2001 TA2003
LR2002 TA2003
JK2000 TJSF36100
D2206 MA8150M
R2217 1K
C2204 470 16V
R2215 22K
R2216 0
R2219 0
D2205 MA8150M
C2203 470 16V
R2218 1K
R_OUT
L_OUT
AUDIO_GND


SHEET ④-a
IC102 24LC16BTISN
IC151# M66B141A
IC150 M66B141A
IC101 M51957BFP
IC100 TV5A0259 (M6900550A)
X100 T93A051
R132 EXB38V473J
R139 EXB38V473J
R134 EXB38V473J
R140 47K
R108 EXB38V473J
R109 EXB38V473J
R112 EXB38V473J
R113 EXB38V473J
R114 EXB38V473J
R115 EXB38V473J
R116 EXB38V473J
L100 30
C111 0.1
C104 0.1
C105 1000 6.3V
C150 100 16V
C151# 0.1
C152 0.1
C102 0.01
C103 0.1
C100 22P
C101 22P
C109 0.1
C107 0.1
C108 0.1
C106 0.1
R103 47K
R105 47K
R106 47K
R107 47K
R120 1K
R121 1K
R122 47K
R123 47K
R124 47K
R110 47K
R111 47K
R117 47K
R118 47K
R119 47K
R126 47K
R127 47K
R128 47K
R125 47K
R129 47K
R131 47K
R130 47K
R133 47K
R135 47K
R136 47K
TP11
TP12 TP13
TP14
TP16 TP17
D100 MA111TX
D101 MA111TX
D102 MA111TX
D103 MA111TX
D104 MA111TX
D105 MA111TX
R145# 100 1/8W
R142 100 1/8W
R143 100 1/8W
R144 100 1/8W
N150 EMC30-4SU4
GND STL
GND GND
FCLK (+5V)
FOUT (TXD)
FIN (RXD)
MAINV
LSIV
PANELV
PLLV
KEY2
KEY1
HSTAT
VSTAT
MAIN_POW
PANEL_POW
LIGHT_OFF
PRC_OFF
PRST
FREERUN
INPUTPOW
PRST
AUTOMODE
INTERFACE
FREERUN
PMODE0
PMODE1
PMODE2
LCDRESET
R100 24K ±1%
R101 10K ±1%
R102 10K
C110 0.1
R161
R162
R163#
R164#
R165 0
R166 0
SCL
SDA
① BUS_SYNC[0-8]
③ BUS_IIC[0-1]
③⑤ ②① BUS_CONT[0-2]
⑤ BUS_5V
⑤ R_OUT
⑤ L_OUT
③⑤ AUDIO_GND
R2204 0 1/8W
R2220# 1/8W
L2200# TAXX0014
L151 TAXX0025
L150 TAXX0029
N151 TJSF09414
N152 TJSF09414
SHEET ④-b
FRONT KEY
HEAD PHONE
N2202# TJS1A8080
N2203# TJS1A8080
JK2200# TJSF35700B
R2209# 470 1/8W
R2208# 470 1/8W
R2207# 330 1/8W
R2206# 330 1/8W
L2210 0
D150 MA157A
D151 MA157A
D154 SK724CSC
D155 MA8056WTX
D156 MA8056WTX
D157 MA8056WTX
D158 MA8056WTX
Q150 UN2111TX
Q151 UN2111TX
R159 390
R160 330
R173 100 ±1%
R174 100 ±1%
R150 17.8K ±1%
R154 17.8K ±1%
R151 4.42K ±1%
R155 4.42K ±1%
R152 7.50K ±1%
R156 7.50K ±1%
C160 100P
C161 100P
R153 14.7K ±1%
R157 14.7K ±1%
R171 44.2K ±1%
R172 44.2K ±1%
R185# 0
R187# 0
R188# 0
R191 0
R193 0
R194 0
R195 0
R189 0
R190# 0
R192 0
SW150 EVQ11L04
SW151 EVQ11L04
SW152 EVQ11L04
SW153 EVQ11L04
SW154 EVQ11L04
SW155 EVQ11L04
SW156 EVQ11L04
SW157 EVQ11L04
SW158 EVQ11L04
SW159 EVQ11L04
MUTE
MENU


N851A
TJSF35919
15V
+15V(AUDIO)
5V(AD)
5V(PANEL)
GND(AUDIO)
MAIN_POW
D8020 MA111TX
D8021 MA111TX
IC8000 BA12FP
IC8001 BA12FP
IC8003 UPC1093T-E1
IC8004 LM324DT
TP5
TP4
TP21
TP19
TP20
TP18
TP2
TP3
TP1
VIDEO_12V
PLL_12V
+15V(AUDIO)
SUB_5V
5V(AD)
PANEL_5V
DIGITAL_3.3V
DIGITAL_2.5V
DIGI_3V (3.3V)
DIGI_2V (2.5V)
BUS_CONTIO-05
AD_5V
PANEL_5V
+15V_AUDIO
TRIGGER
AUDIO_GND
PRC_OFF
LIGHT_DAC
LIGHT_OFF
N852A
TJSF35907
D8008 MA8150WTX
D8011 MA8150WTX
D9005 MA8033H
D9006 MA8047WTX
Q8000 TYSF0013 (2SJ377)
Q8001 2SB1202ST-TL
Q8002 2SD1819AQR
Q8003 2SB1202ST-TL
Q8004 2SD1819AQR
Q8015 UN5211
Q8016 UN5211
Q8020 UN5211
Q8021 2SJ459
Q8022 TYSF0013 (2SJ377)
L8002 EXCELOR35V
FG6 FG7 FG8 FG9


15V ⑦
FB01 XBA2C407B1L
FS801
FS802
FG1
R801 390K 1/2W
C801 0.33 250V
L801 ELF18N018A
D801 ERZVEA431
SW001 ESD91234A
C802 2200P
C803 2200P
C804 0.33 250V
D821 RBV406MLFA
L802 ELF19N015A
FG2
NR01 TJS6A967A
AC IN AC100-240V 50/60Hz AC 4A TUC87574
TH801 ERTD5FFL5R0T
C822 220 400V
R828 200K 1/2W
R822 270K 1/2W
R823 120K 1/2W
R824 56K 1/2W
R825 22K 3W
R826 22K 3W
C829 0.022 630V
D825 RU1PV1
TB21 TLPA067
D853 TUCJ5211 FM35LF
L854 TLPF083
C853 1500P 2KV
C854 1500P 2KV
C857 2200 25V
C858 2200 25V
R856 1K
R857 2.2K
TC852 SE015N
C855 0.22 16V
R891 1.2K 1/2W
D858 MA8180MTX
D857 MA111TX
L858 EXCELDR35V
R821 200K 1/2W
R835 22K 2W
R837 220K 1/2W
R838 100K
D835 MA8330MTX
D834 MA8330MTX
D836 MA111TX
Q821 2SC4620 Y2512
D839 MA113TX
D837 MA111TX
D822 MA8062M
D823 MA8056M
Q824 2SD18025
R843 1.2K 1/2W
C827 0.012
D827 MA113TX
R827 3.3K
D831 SFPL-52V
D832 SFPL-52V
R833 5.6 1/2W
C830 47 25V
R831 2.7K 1/2W
R832 2.7K 1/2W
R842 68K
C834 330P
D830 SFPL-52V
C831 150P
Q823 2SB1219AQRTX
Q822 2SC4620
C835 0.01
R838 10K
NE
C840 47 25V
C836 0.01
D838 MA8110MTX
IC822 STR-F6529H TUC-J5210
C837 0.01
D822 MA8180M
R829 680
C821 TPH331
C833 100 25V
C824 470P
R830 0.22 2W
PC831 ON3171
R868 330
PC832 ON3171
C832 4700P
C850 4700P
PC833 ON3171
C850 100 25V
R841 47K
R840 1K
C839 0.01
R849 4.7K
R848 4.7K
R847 4.7K
Q825 2SB1219R
D825 DZ1A
R844 2.74K ±1%
R845 2.21K ±1%
C838 0.1
R845 1.2K
FG3 FG4 FG5
Q851 UN5211A1TX
D855 MA111TX
R851 1K
R853 15K
R864 2.49K ±1%
TC854 TL5941NS
C851 0.1
R865 10K
C862 1000P
R866 2.49K ±1%
R867 1.8K
C864 1000P
R875 7.5K
C865 0.1
R862 3.9K
R882 470 1/2W
D860 RK46LFL1
C867 0.1
C866 1000 25V
C872 0.1
C871 1000 25V
R869 99.1 ±1%
R870 2.49K ±1%
R876 4.75K ±1%
R871 2.49K ±1%
D863 MA8062MTX
D862 MA111TX
D859 MA111
Q856 2SB1218A
C860 0.1
R892 100
R893 0.12 1W
R877 1K
R878 1.5K
R879 470
C870 0.01
R883 0
Q855 FMY1A
R880 10 1/2W
R881 0
Q858 TK9F0013 I2SJ377
L859 47
ELC12E470
C873 0.2 16V
R874 50m 1W
D850 TJS6A9650
D869 EX14LF81
D867 MA8200M
D868 MA8200M
D866 TJS6A9660
C869 0.01
R858 22K
R859 0
Q852 UN5211A1TX
Q850 2SJ489-TL
NR518 TJSF36019
TP37
TP35
TP38
TP39
TP40
TP36
15V
15V
+15V(AUDIO)
+15V(AUDIO)
5V (AD)
5V (PANEL)
5V
5V
5V
GND (AUDIO)
GND (AUDIO)
GND
GND
GND
GND
GND
GND
MAIN_POW
5V ⑦
TRIGGER ⑦
LIGHT_OFF ⑦
LIGHT_DAC ⑦
GND
OVP
PRC_OFF
GND
NR528 TJSF36007
PRIMARY
SECONDARY



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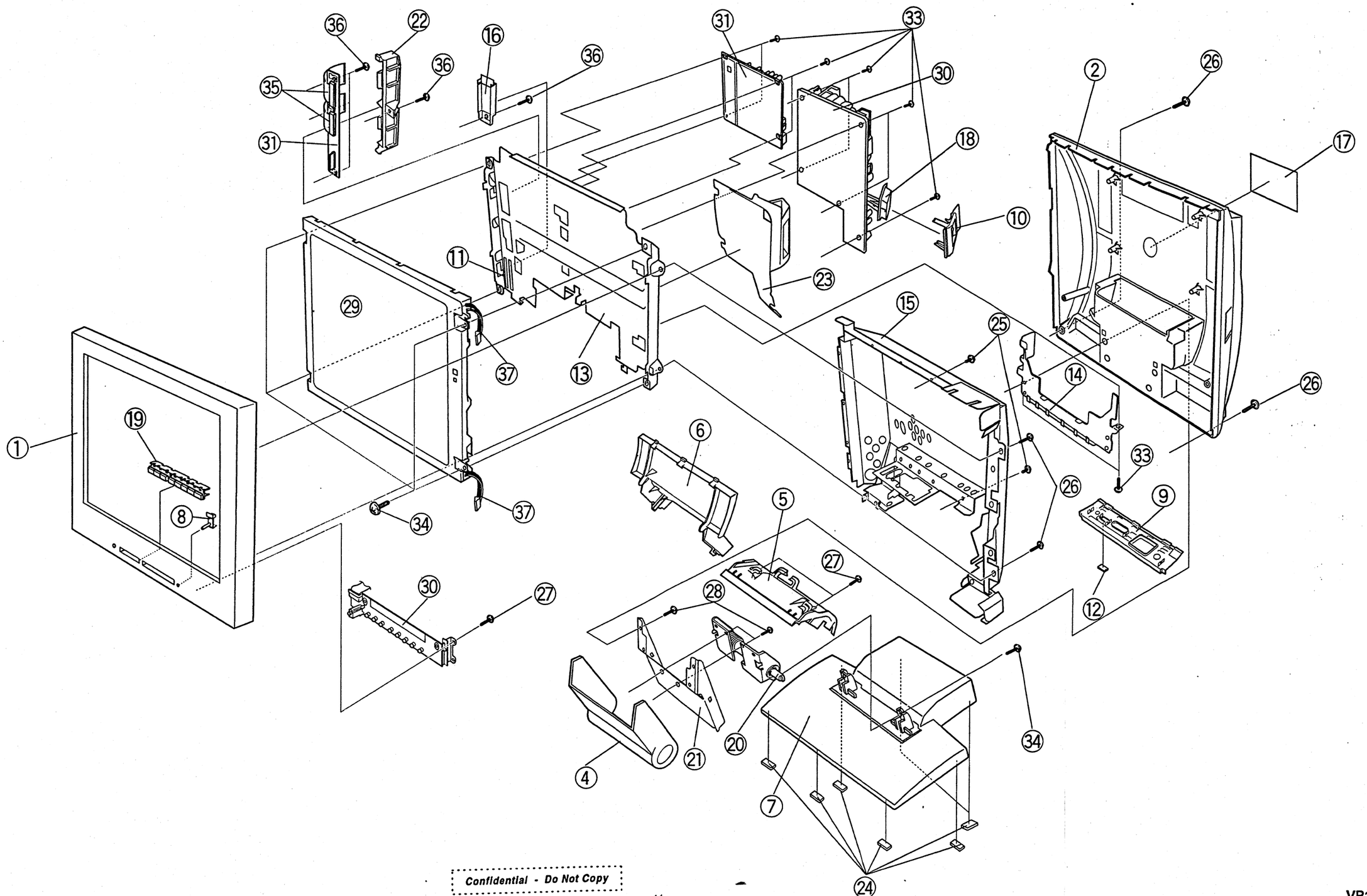
## EXPLODED VIEW

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# REPLACEMENT PARTS LIST

**Important Safety Notice**

Components identified by the International symbol ⚠ have special characteristics important for safety.
When replacing any of these components use only manufacture's specified parts.

RESISTOR

| PART NAME & DESCRIPTION | | | |
|---|---|---|---|
| TYPE | | ALLOWANCE | |
| C | Carbon | F | ± 1% |
| F | Fuse | J | ± 5% |
| M | Metal Oxide | K | ± 10% |
| S | Solid | M | ± 20% |
| W | Wire Wound | G | ± 2% |

Example: ERD25TJ104 (C) 100K (J) 1/4W — Part No. / Description

CAPACITOR

| PART NAME & DESCRIPTION | | | |
|---|---|---|---|
| TYPE | | ALLOWANCE | |
| C | Ceramic | C | ± 0.25pF |
| E | Electrolytic | D | ± 0.5pF |
| P | Polyester | F | ± 1pF |
| S | Styrol | J | ± 5% |
| T | Tantalum | K | ± 10% |
| PP | Polypropylene | L | ± 15% |
| | | M | ± 20% |
| | | P | +100% – 0% |
| | | Z | +80% – 20% |

Example: ECKF1H103ZF (C) 0.01µF (Z) 50V — Part No. / Description

| | Ref.No. | Part No. | Description |
|---|---|---|---|
| | | | CABINET & MAIN PARTS |
| ⚠ | 1 | TKYA12001 | ESCUTCHEON |
| ⚠ | 2 | TKUC05902 | REAR COVER |
| | 3 | TKCX025 | TILT BASE |
| ⚠ | 4 | TKXA01802 | TILT COVER(FRONT) |
| ⚠ | 5 | TKXA03502 | TILT COVER(REAR) |
| ⚠ | 6 | TKXA03601 | CABLE COVER |
| ⚠ | 7 | TKXA03801 | TILT BASE COVER |
| ⚠ | 8 | TKKC5077 | LED GUIDE |
| ⚠ | 9 | TKKL5055C01 | TERMINAL COVER |
| ⚠ | 10 | TKKL5056 | POWER SWITCH KNOB HOLDER |
| | 11 | TKKX5032 | GASKET |
| ⚠ | 12 | TKK859745-9 | CONNECTOR COVER |
| | 13 | TUAA07501 | LCD BRACKET |
| | 14 | TKZX5025 | PROTECTOR |
| | 15 | TUCC5389 | SHIELD CASE |
| | 16 | TUCC5401-1 | SHIELD CASE(CONNECT PCB) |
| | | TUCC5402-1 | SHIELD PLATE |
| ⚠ | 17 | TBMD361 | MODEL NAME LABEL |
| ⚠ | 18 | TBXA18501 | KNOB(POWER SWITCH) |
| ⚠ | 19 | TBXA19901 | KNOB(CONTROL) |
| | | TESA065 | EARTH SPRING |
| | | TES9518-2 | SPRING(CRT EARTH) |
| | 20 | TEJA006 | TILT SHAFT |
| | 21 | TEJC001 | ARM |
| ⚠ | 22 | TMXC004 | FERRITE CORE HOLDER(L) |
| ⚠ | | TMXC005 | FERRITE CORE HOLDER(S) |
| ⚠ | 23 | TMKE130-1 | PC BOARD BARRIER |
| ⚠ | | TMKG104 | CRT RUBBER (WHITE) |
| ⚠ | 24 | TMKK039-1 | SET LEG |
| | 25 | THT1069 | SCREW(FOR SHIELD CASE) |
| | 34 | XTB4+10F | SCREW |
| | 26 | XTB4+12G | SCREW |
| | 27 | XTV3+12J | SCREW |
| | 36 | XTW3+6T | SCREW |
| | 33 | XYA4+EF8 | SCREW |
| | 28 | XYN4+F10 | SCREW |
| ⚠ | 29 | EDTCF02QAF | LIQUID CRYSTAL DISPLAY |
| ⚠ | 30 | TNPA1141-22 | PC BOARD W/COMPONENT (M.PS INVERTER/CONTROL) |
| | 31 | TNPH0222-22 | PC BOARD W/COMPONENT (MAIN/CONNECT) |
| ⚠ | | TSXA023 | POWER CORD |
| ⚠ | | TSXA076 | POWER CORD |
| | | TSXF051-1 | SIGNAL CORD |
| | | TSXL086 | FLAT CORD(14P) |
| | 35 | TSXL087 | FLAT CORD(33P) |
| | | TSKA150 | FERRITE CORE(SMALL) |
| | | TSKA151 | FERRITE CORE(BIG) |
| | | TPCA65801 | OUTER CARTON |
| | | TPDF0185 | CARTON SPACER |
| | | TXAPD1D5L31 | FILLER |
| | | TPEH040 | SET COVER |
| | | TQE8513-2 | FUN BAG COVER |
| | | TQBE0151 | INSTRUCTION BOOK(TC095) |
| ⚠ | | TQBE0281 | INSTRUCTION BOOK |
| | | TQFA343 | BAR CODE LABEL |
| | | TQF83825-6 | SERIAL NO. LABEL |
| | | TQF85210 | HIGH VOLTAGE LABEL |
| ⚠ | | TQF86608 | EARTH CAUTION LABEL |
| | 37 | LLF0077 | FLUORESCENT LAMP ASSY |
| | | | I.C |
| | IC100 | TVRB042 | IC |
| | IC101 | M51957BFP-E1 | IC |
| | IC102 | 24LC16BTISN | IC |
| | IC150 | MB88141APFTF | IC |
| | IC200 | 24LC21TISN | IC |
| | IC201 | TVSA0127 | IC |
| | IC202 | TVSA0126 | IC |
| | IC203 | TVSA0291 | IC |
| | IC204 | TVSA0289 | IC |



| Ref.No. | Part No. | Description |
|---|---|---|
| IC670 | TL1451ACNS | IC |
| IC680 | TL1451ACNS | IC |
| IC690 | LM2904DT | IC |
| IC822 | STR-F6526M | HYBRID IC |
| IC852 | SEO15N | IC |
| IC854 | TL594INS | IC |
| IC1300 | M52307SP | IC |
| IC1400 | TVSA0289 | IC |
| IC1401 | LSC4332DW | IC |
| IC6000 | MB87F1400 | IC |
| IC6003 | TVSA0128 | IC |
| IC6300 | MB40C558V-EF | IC |
| IC6301 | MB40C558V-EF | IC |
| IC6400 | MB40C558V-EF | IC |
| IC6401 | MB40C558V-EF | IC |
| IC6500 | MB40C558V-EF | IC |
| IC6501 | MB40C558V-EF | IC |
| IC6600 | LM6132BIMX | IC |
| IC6601 | TVSA0290 | IC |
| IC8000 | BA12FP | IC |
| IC8001 | BA12FP | IC |
| IC8003 | UPC1093T | IC |
| IC8004 | LM324MX | IC |
| | | TRANSISTORS |
| Q150 | UN2111 | TRANSISTOR |
| Q151 | UN2111 | TRANSISTOR |
| Q200 | 2SC3938R | TRANSISTOR |
| Q201 | 2SD601AR | TRANSISTOR |
| Q601 | 2SD1802ST | TRANSISTOR |
| Q602 | 2SD1802ST | TRANSISTOR |
| Q608 | 2SJ499 | TRANSISTOR |
| Q610 | FMY1A | TRANSISTOR |
| Q612 | 2SB1219AQ | TRANSISTOR |
| Q615 | 2SC3938R | TRANSISTOR |
| Q621 | 2SD1802ST | TRANSISTOR |
| Q622 | 2SD1802ST | TRANSISTOR |
| Q628 | 2SJ499 | TRANSISTOR |
| Q630 | FMY1A | TRANSISTOR |
| Q632 | 2SB1219AQ | TRANSISTOR |
| Q635 | 2SC3938R | TRANSISTOR |
| Q691 | UN5211AI | TRANSISTOR |
| Q692 | 2SB1219AQ | TRANSISTOR |
| Q821 | 2SC4620V25 | TRANSISTOR |
| Q822 | 2SC4620V25 | TRANSISTOR |
| Q823 | 2SB1219AQ | TRANSISTOR |
| Q824 | 2SD1802ST | TRANSISTOR |
| Q825 | IMZ1A | TRANSISTOR |
| Q826 | 2SB1219R | TRANSISTOR |
| Q850 | 2SJ499 | TRANSISTOR |
| Q851 | UN5211AI | TRANSISTOR |
| Q852 | UN5211AI | TRANSISTOR |
| Q855 | FMY1A | TRANSISTOR |
| Q856 | 2SB1218AQ | TRANSISTOR |
| Q858 | TVSF0013 | TRANSISTOR |
| Q1000 | 2SC3938R | TRANSISTOR |
| Q1001 | 2SA1739R | TRANSISTOR |
| Q1002 | 2SA1739R | TRANSISTOR |
| Q1003 | 2SD601AR | TRANSISTOR |
| Q1004 | 2SC3938R | TRANSISTOR |
| Q1005 | 2SD601AR | TRANSISTOR |
| Q1006 | 2SC3938R | TRANSISTOR |
| Q1007 | 2SC3938R | TRANSISTOR |
| Q1008 | 2SA1739R | TRANSISTOR |
| Q1009 | 2SC3938R | TRANSISTOR |
| Q1010 | 2SA1739R | TRANSISTOR |
| Q1100 | 2SC3938R | TRANSISTOR |
| Q1101 | 2SA1739R | TRANSISTOR |
| Q1102 | 2SA1739R | TRANSISTOR |
| Q1103 | 2SD601AR | TRANSISTOR |
| Q1104 | 2SC3938R | TRANSISTOR |
| Q1105 | 2SD601AR | TRANSISTOR |
| Q1106 | 2SC3938R | TRANSISTOR |
| Q1107 | 2SC3938R | TRANSISTOR |
| Q1108 | 2SA1739R | TRANSISTOR |
| Q1109 | 2SC3938R | TRANSISTOR |
| Q1110 | 2SA1739R | TRANSISTOR |
| Q1200 | 2SC3938R | TRANSISTOR |
| Q1201 | 2SA1739R | TRANSISTOR |
| Q1202 | 2SA1739R | TRANSISTOR |
| Q1203 | 2SD601AR | TRANSISTOR |
| Q1204 | 2SC3938R | TRANSISTOR |
| Q1205 | 2SD601AR | TRANSISTOR |
| Q1206 | 2SC3938R | TRANSISTOR |
| Q1207 | 2SC3938R | TRANSISTOR |
| Q1208 | 2SA1739R | TRANSISTOR |
| Q1209 | 2SC3938R | TRANSISTOR |
| Q1210 | 2SA1739R | TRANSISTOR |
| Q1300 | 2SD601AR | TRANSISTOR |
| Q1400 | 2SA1739R | TRANSISTOR |
| Q1401 | 2SA1739R | TRANSISTOR |
| Q6000 | 2SA1739R | TRANSISTOR |
| Q6001 | UN5211AI | TRANSISTOR |
| Q6602 | 2SC4270 | TRANSISTOR |
| Q6603 | 2SD601AR | TRANSISTOR |
| Q8000 | TVSF0013 | TRANSISTOR |
| Q8001 | 2SB1202S-FA | TRANSISTOR |
| Q8002 | 2SD1819AQ | TRANSISTOR |
| Q8003 | 2SB1202S-FA | TRANSISTOR |
| Q8004 | 2SD1819AQ | TRANSISTOR |
| Q8015 | UN5211AI | TRANSISTOR |
| Q8016 | UN5211AI | TRANSISTOR |
| Q8020 | UN5211AI | TRANSISTOR |
| Q8021 | 2SJ499 | TRANSISTOR |
| Q8022 | TVSF0013 | TRANSISTOR |
| | | DIODES |
| D100 | MA111 | DIODE |
| D101 | MA111 | DIODE |
| D102 | MA111 | DIODE |
| D103 | MA111 | DIODE |
| D104 | MA111 | DIODE |
| D105 | MA111 | DIODE |
| D150 | MA157A | DIODE |
| D151 | MA157A | DIODE |
| D152 | MA8056M | DIODE |
| D153 | MA8056M | DIODE |
| D154 | SML72423C | DIODE(LED) |
| D165 | MA8056M | DIODE |
| D200 | MA8056M | DIODE |
| D201 | MA8056M | DIODE |
| D202 | MA8056M | DIODE |
| D203 | MA8056M | DIODE |
| D204 | MA111 | DIODE |

| | Ref.No. | Part No. | Description |
|---|---|---|---|
| | D205 | MA728 | DIODE |
| | D604 | MA111 | DIODE |
| | D608 | RK14 | DIODE |
| | D624 | MA111 | DIODE |
| | D628 | RK14 | DIODE |
| | D651 | DAN217 | DIODE |
| | D658 | MA111 | DIODE |
| | D661 | DAN217 | DIODE |
| | D668 | MA111 | DIODE |
| ⚠ | D801 | ERZVEAV431 | VARISTOR |
| ⚠ | D821 | RBV406M | DIODE |
| | D822 | MA8180M | DIODE |
| | D823 | MA8062M | DIODE |
| | D825 | MA8068M | DIODE |
| | D826 | RU1P | DIODE |
| | D827 | MA113 | DIODE |
| | D829 | MA8330M | DIODE |
| | D830 | SFPL-52V | DIODE |
| | D831 | SFPL-52V | DIODE |
| | D832 | SFPL-52V | DIODE |
| | D834 | SFPL-52V | DIODE |
| | D835 | MA8330M | DIODE |
| | D836 | MA111 | DIODE |
| | D837 | MA111 | DIODE |
| | D838 | MA8110M | DIODE |
| | D839 | MA113 | DIODE |
| | D853 | FMB-39LF | DIODE |
| | D857 | MA111 | DIODE |
| | D858 | MA8180M | DIODE |
| | D860 | RK46 | DIODE |
| | D861 | MA111 | DIODE |
| | D862 | MA111 | DIODE |
| | D863 | MA8062M | DIODE |
| | D866 | MA111 | DIODE |
| | D1000 | MA111 | DIODE |
| | D1001 | MA111 | DIODE |
| | D1100 | MA111 | DIODE |
| | D1101 | MA111 | DIODE |
| | D1200 | MA111 | DIODE |
| | D1201 | MA111 | DIODE |
| | D6600 | MA374TXFD | DIODE |
| | D6601 | MA374TXFD | DIODE |
| | D6602 | MA728 | DIODE |
| | D8002 | MA111 | DIODE |
| | D8003 | MA111 | DIODE |
| | D8004 | MA111 | DIODE |
| | D8005 | MA8033H | DIODE |
| | D8006 | MA8047M | DIODE |
| | D8008 | MA8150M | DIODE |
| | D8010 | MA111 | DIODE |
| | D8011 | MA8150M | DIODE |
| | | COIL & TRANSFORMERS | |
| | L100 | ELJPA390KB | CHIP COIL |
| | L150 | TAXX0029 | NOISE FILTER |
| | L151 | TAXX0029 | NOISE FILTER |
| | L200 | ELJPA100KB | CHIP COIL |
| | L201 | TAX10073 | NOISE FILTER |
| | L202 | TAX10073 | NOISE FILTER |
| ⚠ | L606 | ELC10B101 | CHOKE COIL |
| ⚠ | L626 | ELC10B101 | CHOKE COIL |

| | Ref.No. | Part No. | Description |
|---|---|---|---|
| ⚠ | L801 | ELF18N016A | LINE FILTER |
| ⚠ | L802 | ELF19N016A | LINE FILTER |
| | L821 | TSK8031 | FERRITE CORE |
| | L854 | TLPF083 | CHOKE COIL |
| | L858 | EXCELDR35C | LC COMBINATION |
| ⚠ | L859 | ELC12E470 | CHOKE COIL |
| | L1000 | ELJPA100KB | CHIP COIL |
| | L1300 | ELJPA100KB | CHIP COIL |
| | L1301 | ELJPA100KB | CHIP COIL |
| | L1302 | ELJPA100KB | CHIP COIL |
| | L1400 | ELJPA100KB | CHIP COIL |
| | L6000 | ELJPA101KB | CHIP COIL |
| | L6001 | ELJPA100KB | CHIP COIL |
| | L6002 | TAXX0014 | NOISE FILTER |
| | L6003 | TAXX0014 | NOISE FILTER |
| | L6010 | TAXX0034 | NOISE FILTER |
| | L6011 | TAXX0035 | NOISE FILTER |
| | L6012 | TAXX0035 | NOISE FILTER |
| | L6013 | TAXX0035 | NOISE FILTER |
| | L6014 | TAXX0035 | NOISE FILTER |
| | L6015 | TAXX0035 | NOISE FILTER |
| | L6016 | TAXX0035 | NOISE FILTER |
| | L6017 | TAXX0035 | NOISE FILTER |
| | L6018 | TAXX0035 | NOISE FILTER |
| | L6019 | TAXX0035 | NOISE FILTER |
| | L6020 | TAXX0035 | NOISE FILTER |
| | L6021 | TAXX0035 | NOISE FILTER |
| | L6022 | TAXX0035 | NOISE FILTER |
| | L6023 | TAXX0035 | NOISE FILTER |
| | L6024 | TAXX0035 | NOISE FILTER |
| | L6025 | TAXX0035 | NOISE FILTER |
| | L6026 | TAXX0035 | NOISE FILTER |
| | L6027 | TAXX0035 | NOISE FILTER |
| | L6028 | TAXX0035 | NOISE FILTER |
| | L6029 | TAXX0035 | NOISE FILTER |
| | L6030 | TAXX0035 | NOISE FILTER |
| | L6031 | TAXX0035 | NOISE FILTER |
| | L6032 | TAXX0035 | NOISE FILTER |
| | L6033 | TAXX0035 | NOISE FILTER |
| | L6034 | TAXX0035 | NOISE FILTER |
| | L6035 | TAXX0035 | NOISE FILTER |
| | L6036 | TAXX0035 | NOISE FILTER |
| | L6037 | TAXX0035 | NOISE FILTER |
| | L6038 | TAXX0035 | NOISE FILTER |
| | L6039 | TAXX0035 | NOISE FILTER |
| | L6040 | TAXX0035 | NOISE FILTER |
| | L6041 | TAXX0035 | NOISE FILTER |
| | L6042 | TAXX0035 | NOISE FILTER |
| | L6043 | TAXX0035 | NOISE FILTER |
| | L6044 | TAXX0035 | NOISE FILTER |
| | L6045 | TAXX0035 | NOISE FILTER |
| | L6046 | TAXX0035 | NOISE FILTER |
| | L6047 | TAXX0032 | NOISE FILTER |
| | L6300 | ELJPA100KB | CHIP COIL |
| | L6600 | ELJNDR33JB | CHIP COIL |
| | L6602 | ELJPA101KB | CHIP COIL |
| | L8002 | EXCELDR35C | LC COMBINATION |
| ⚠ | T601 | ETJ20K8AM | INVERTER TRANSFORMER |
| ⚠ | T621 | ETJ20K8AM | INVERTER TRANSFORMER |
| ⚠ | T821 | TLPA067 | POWER TRANSFORMER |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| | CAPACITORS | | | | |
| C100 | ECUX1H220JCN | C | 22PF | J | 50V |
| C101 | ECUX1H220JCN | C | 22PF | J | 50V |
| C102 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C103 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C104 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C105 | ECA0JHG102 | E | 1000UF | | 6.3V |
| C106 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C107 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C108 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C109 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C110 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C111 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C150 | ECA1CHG101 | E | 100UF | | 16V |
| C152 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C160 | ECUX1H101JCG | C | 100PF | J | 50V |
| C161 | ECUX1H101JCG | C | 100PF | J | 50V |
| C202 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C203 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C204 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C205 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V |
| C206 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V |
| C207 | ECUX1H101JCG | C | 100PF | J | 50V |
| C208 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V |
| C209 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V |
| C210 | ECJ2VF1H683Z | C | 0.068UF | Z | 50V |
| C211 | ECA1HHG100 | E | 10UF | | 50V |
| C212 | ECUX1H221JCG | C | 220PF | J | 50V |
| C213 | ECUX1H101JCG | C | 100PF | J | 50V |
| C214 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C215 | ECA1CHG470 | E | 47UF | | 16V |
| C221 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C222 | ECA1CHG470 | E | 47UF | | 16V |
| C223 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C601 | ECHS1H333JZ | P | 0.033UF | J | 50V |
| C608 | ECQB1H104JF | P | 0.1UF | J | 50V |
| C611 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C618 | ECUX1H562KBG | C | 5600PF | K | 50V |
| C621 | ECHS1H333JZ | P | 0.033UF | J | 50V |
| C628 | ECQB1H104JF | P | 0.1UF | J | 50V |
| C631 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C638 | ECUX1H562KBG | C | 5600PF | K | 50V |
| C651 | ECCD3F150JGE | C | 15PF | J | 3KV |
| C652 | ECCD3F150JGE | C | 15PF | J | 3KV |
| C655 | ECA1HHG100 | E | 10UF | | 50V |
| C658 | ECQB1H104JF | P | 0.1UF | J | 50V |
| C661 | ECCD3F150JGE | C | 15PF | J | 3KV |
| C662 | ECCD3F150JGE | C | 15PF | J | 3KV |
| C665 | ECA1HHG100 | E | 10UF | | 50V |
| C668 | ECQB1H104JF | P | 0.1UF | J | 50V |
| C670 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C671 | ECUX1H331JCG | C | 330PF | J | 50V |
| C672 | ECUX1H471JCX | C | 470PF | J | 50V |
| C673 | ECUX1H471JCX | C | 470PF | J | 50V |
| C675 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C679 | ECUX1H152KBN | C | 1500PF | K | 50V |
| C680 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C681 | ECQB1H183JF | P | 0.018UF | J | 50V |
| C682 | ECUX1H562KBG | C | 5600PF | K | 50V |
| C683 | ECUX1H562KBG | C | 5600PF | K | 50V |
| C684 | ECJ2VF1C105Z | C | 1UF | Z | 16V |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C685 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C686 | ECJ2VF1H473Z | C | 0.047UF | Z | 50V |
| C687 | ECJ2VF1H473Z | C | 0.047UF | Z | 50V |
| C688 | ECA0JHG471 | E | 470UF | | 6.3V |
| C690 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C692 | ECA1HHG101 | E | 100UF | | 50V |
| ⚠ C801 | ECQU2A334MVZ | PP | 0.33UF | M | 250V |
| ⚠ C802 | ECKDRS222MEY | C | 2200PF | M | |
| ⚠ C803 | ECKDRS222MEY | C | 2200PF | M | |
| ⚠ C804 | ECQU2A334MVZ | PP | 0.33UF | M | 250V |
| C822 | ECOS2GB221DB | E | 220UF | | 400V |
| C824 | ECUX1H471KBN | C | 470PF | K | 50V |
| C827 | ECUX1H123KBX | C | 0.012UF | K | 50V |
| C828 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C829 | ECQE6223KF | P | 0.022UF | K | 600V |
| C830 | ECA1ETE470 | E | 47UF | | 25V |
| C831 | ECUX1H151JCG | C | 150PF | J | 50V |
| ⚠ C832 | ECKDRS472MEY | C | 4700PF | M | |
| C833 | ECKD3D101KBP | C | 100PF | K | 2KV |
| C834 | ECUX1H331JCG | C | 330PF | J | 50V |
| C835 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C836 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C837 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C838 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C840 | ECA1ETE470 | E | 47UF | | 25V |
| ⚠ C850 | ECKDRS472MEY | C | 4700PF | M | |
| C853 | ECKD3D152KBP | C | 1500PF | K | 2KV |
| C854 | ECKD3D152KBP | C | 1500PF | K | 2KV |
| C855 | ECJ2VF1C224Z | C | 0.22UF | Z | 16V |
| C857 | EEUFC1E222S | E | 2200UF | | 25V |
| C859 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C860 | ECA1ETE101 | E | 100UF | | 25V |
| C861 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C862 | ECQB1H102JF | P | 1000PF | J | 50V |
| C863 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C864 | ECQB1H102JF | P | 1000PF | J | 50V |
| C865 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C866 | ECA1ETE102 | E | 1000UF | | 25V |
| C867 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C868 | EEUFC1E222S | E | 2200UF | | 25V |
| C870 | ECQB1H103JF | P | 0.01UF | J | 50V |
| C871 | EEUFC1E102 | E | 1000UF | | 25V |
| C872 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C873 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V |
| C880 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C894 | ECA1ETE470 | E | 47UF | | 25V |
| C1000 | ECA1CHG470 | E | 47UF | | 16V |
| C1001 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1002 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1003 | ECUX1H560JCG | C | 56PF | J | 50V |
| C1004 | ECUX1H270JCG | C | 27PF | J | 50V |
| C1005 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1006 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1007 | ECA1CEN220 | E | 22UF | | 16V |
| C1008 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1010 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1100 | ECA1CHG470 | E | 47UF | | 16V |
| C1101 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1102 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1103 | ECUX1H560JCG | C | 56PF | J | 50V |
| C1104 | ECUX1H270JCG | C | 27PF | J | 50V |
| C1105 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |

| Ref.No. | Part No. | Description | | | | Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C1106 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6031 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V |
| C1107 | ECA1CEN220 | E | 22UF | | 16V | C6050 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1108 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6052 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1110 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6300 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1200 | ECA1CHG470 | E | 47UF | | 16V | C6301 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1201 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6302 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1202 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6303 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1203 | ECUX1H560JCG | C | 56PF | J | 50V | C6304 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1204 | ECUX1H270JCG | C | 27PF | J | 50V | C6305 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1205 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6306 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1206 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6307 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1207 | ECA1CEN220 | E | 22UF | | 16V | C6308 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1208 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6309 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1210 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6310 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C1300 | ECA1CHG470 | E | 47UF | | 16V | C6312 | ECA0JHG221 | E | 220UF | | 6.3V |
| C1302 | ECA1CHG470 | E | 47UF | | 16V | C6400 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1303 | ECA1CHG471 | E | 470UF | | 16V | C6401 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1304 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6402 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1305 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6403 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1306 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6404 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1307 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6405 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1308 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6406 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1309 | ECUX1C474KBW | C | 0.47UF | K | 16V | C6407 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1310 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6408 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1311 | ECUX1C474KBW | C | 0.47UF | K | 16V | C6409 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1312 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6412 | ECA0JHG221 | E | 220UF | | 6.3V |
| C1313 | ECUX1C474KBW | C | 0.47UF | K | 16V | C6500 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1314 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6501 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1315 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6502 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1316 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6503 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1317 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6504 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1318 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6505 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1319 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6506 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1400 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6507 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1401 | ECUX1H103KBG | C | 0.01UF | K | 50V | C6508 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1402 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6509 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C1403 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6510 | ECA1CHG470 | E | 47UF | | 16V |
| C1404 | ECUX1H101JCG | C | 100PF | J | 50V | C6511 | ECA1CHG470 | E | 47UF | | 16V |
| C6000 | ECA1CHG101 | E | 100UF | | 16V | C6512 | ECA0JHG221 | E | 220UF | | 6.3V |
| C6001 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6600 | ECUX1H101JCG | C | 100PF | J | 50V |
| C6002 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6601 | ECQV1H154JL | P | 0.15UF | J | 50V |
| C6003 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6602 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C6004 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6603 | ECUX1H152JCX | C | 1500PF | J | 50V |
| C6005 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6604 | ECA1HHG2R2 | E | 2.2UF | | 50V |
| C6006 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6605 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C6007 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6607 | ECUX1H101JCG | C | 100PF | J | 50V |
| C6008 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6609 | ECUX1H821JCX | C | 820PF | J | 50V |
| C6009 | ECA1CHG101 | E | 100UF | | 16V | C6610 | ECUX1H821JCX | C | 820PF | J | 50V |
| C6010 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6611 | ECUX1H101JCG | C | 100PF | J | 50V |
| C6012 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6612 | ECA1CHG470 | E | 47UF | | 16V |
| C6013 | ECA1CHG101 | E | 100UF | | 16V | C6613 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C6014 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6614 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C6015 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6615 | ECUX1H681KBN | C | 680PF | K | 50V |
| C6016 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C6616 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C6017 | ECA1CHG101 | E | 100UF | | 16V | C6617 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V |
| C6018 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C8004 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C6019 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C8005 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C6020 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C8006 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C6023 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C8007 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C6024 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C8008 | ECJ2VF1C105Z | C | 1UF | Z | 16V |
| C6025 | ECJ2VF1H104Z | C | 0.1UF | Z | 50V | C8009 | ECUX1H103KBG | C | 0.01UF | K | 50V |
| C6030 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V | C8010 | ECA1HHG330 | E | 33UF | | 50V |

| Ref.No. | Part No. | Description | | | | Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C8011 | ECA1HHG100 | E | 10UF | | 50V | R151 | ERJ6ENF4421 | M | 4.42K OHM | F | 1/10W |
| C8012 | ECA1HHG100 | E | 10UF | | 50V | R152 | ERJ6ENF7501 | M | 7.5K OHM | F | 1/10W |
| C8015 | ECA1CHG221 | E | 220UF | | 16V | R153 | ERJ6ENF1472 | M | 14.7K OHM | F | 1/10W |
| C8016 | ECUX1H103KBG | C | 0.01UF | K | 50V | R154 | ERJ6ENF1782 | M | 17.8K OHM | F | 1/10W |
| C8017 | ECA1CHG221 | E | 220UF | | 16V | R155 | ERJ6ENF4421 | M | 4.42K OHM | F | 1/10W |
| C8018 | ECA1CHG221 | E | 220UF | | 16V | R156 | ERJ6ENF7501 | M | 7.5K OHM | F | 1/10W |
| C8019 | ECUX1H103KBG | C | 0.01UF | K | 50V | R157 | ERJ6ENF1472 | M | 14.7K OHM | F | 1/10W |
| C8020 | ECA1CHG221 | E | 220UF | | 16V | R159 | ERJ6GEYJ391 | M | 390 OHM | J | 1/10W |
| C8021 | ECUX1H103KBG | C | 0.01UF | K | 50V | R160 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W |
| C8022 | ECUX1H103KBG | C | 0.01UF | K | 50V | R161 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| C8027 | ECA1CHG221 | E | 220UF | | 16V | R162 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| C8030 | ECJ3VF1C225Z | C | 2.2UF | Z | 16V | R165 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| C8031 | ECA1CHG221 | E | 220UF | | 16V | R166 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| | RESISTORS | | | | | R167 | ERJ6GEYJ223 | M | 22K OHM | J | 1/10W |
| | | | | | | R168 | ERJ6GEYJ333 | M | 33K OHM | J | 1/10W |
| L2210 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W | R169 | ERJ6GEYJ823 | M | 82K OHM | J | 1/10W |
| R100 | ERJ6ENF2402 | M | 24K OHM | F | 1/10W | R170 | ERJ6GEYJ273 | M | 27K OHM | J | 1/10W |
| R101 | ERJ6ENF1002 | M | 10K OHM | F | 1/10W | R171 | ERJ6ENF4422 | M | 44.2K OHM | F | 1/10W |
| R102 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R172 | ERJ6ENF4422 | M | 44.2K OHM | F | 1/10W |
| R103 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R173 | ERJ6ENF1000 | M | 100 OHM | F | 1/10W |
| R105 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R174 | ERJ6ENF1000 | M | 100 OHM | F | 1/10W |
| R106 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R191 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R107 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R192 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R108 | EXBS8V473J | RR | COMBINATION | | | R193 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R109 | EXBS8V473J | RR | COMBINATION | | | R194 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R110 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R195 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R111 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R201 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W |
| R112 | EXBS8V473J | RR | COMBINATION | | | R202 | ERJ6GEYJ223 | M | 22K OHM | J | 1/10W |
| R113 | EXBS8V473J | RR | COMBINATION | | | R204 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W |
| R114 | EXBS8V473J | RR | COMBINATION | | | R205 | ERJ6GEYJ223 | M | 22K OHM | J | 1/10W |
| R115 | EXBS8V473J | RR | COMBINATION | | | R206 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W |
| R116 | EXBS8V473J | RR | COMBINATION | | | R207 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W |
| R117 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R208 | ERJ6GEYJ221 | M | 220 OHM | J | 1/10W |
| R118 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R209 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W |
| R119 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R210 | ERJ6GEYJ101 | M | 100 OHM | J | 1/10W |
| R120 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W | R211 | ERJ6GEYJ183 | M | 18K OHM | J | 1/10W |
| R121 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W | R212 | ERJ6GEYJ152 | M | 1.5K OHM | J | 1/10W |
| R122 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R213 | ERJ6GEYJ682 | M | 6.8K OHM | J | 1/10W |
| R123 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R214 | ERJ6GEYJ152 | M | 1.5K OHM | J | 1/10W |
| R124 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R215 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R125 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R216 | ERJ6GEYJ562 | M | 5.6K OHM | J | 1/10W |
| R126 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R217 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R127 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R218 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R128 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R219 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R129 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R279 | ERJ6GEYJ472 | M | 4.7K OHM | J | 1/10W |
| R130 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R601 | ERJ12YJ472 | M | 4.7K OHM | J | 1/2W |
| R131 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R602 | ERJ12YJ472 | M | 4.7K OHM | J | 1/2W |
| R132 | EXBS8V473J | RR | COMBINATION | | | R603 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R134 | EXBS8V473J | RR | COMBINATION | | | R604 | ERJ6GEYJ332 | M | 3.3K OHM | J | 1/10W |
| R135 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R606 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R136 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R608 | ERJ8GCY0R00 | M | 0 OHM | | 1/8W |
| R137 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R609 | ERJ12YJ100 | M | 10 OHM | J | 1/2W |
| R139 | EXBS8V473J | RR | COMBINATION | | | R610 | ERJ12YJ471 | M | 470 OHM | J | 1/2W |
| R140 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W | R611 | ERJ8GCYJ471 | M | 470 OHM | J | 1/8W |
| R142 | ERJ8GCYJ101 | M | 100 OHM | J | 1/8W | R612 | ERJ8GCYJ152 | M | 1.5K OHM | J | 1/8W |
| R143 | ERJ8GCYJ101 | M | 100 OHM | J | 1/8W | R613 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W |
| R144 | ERJ8GCYJ101 | M | 100 OHM | J | 1/8W | R614 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W |
| R146 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R615 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W |
| R147 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R616 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W |
| R148 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R617 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W |
| R149 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R618 | ERJ6GEYJ333 | M | 33K OHM | J | 1/10W |
| R150 | ERJ6ENF1782 | M | 17.8K OHM | F | 1/10W | R619 | ERJ6GEYJ223 | M | 22K OHM | J | 1/10W |

| Ref.No. | Part No. | Description | | | | | Ref.No. | Part No. | Description | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R620 | ERQ14AJR22HK | F | 0.22 | OHM | J | 1/4W | R827 | ERJ6GEYJ332 | M | 3.3K | OHM | J | 1/10W |
| R621 | ERJ12YJ472 | M | 4.7K | OHM | J | 1/2W | R828 | ERJ12YJ474 | M | 470K | OHM | J | 1/2W |
| R622 | ERJ12YJ472 | M | 4.7K | OHM | J | 1/2W | R829 | ERJ6GEYJ681 | M | 680 | OHM | J | 1/10W |
| R623 | ERJ6GEYJ473 | M | 47K | OHM | J | 1/10W | R830 | ERF2EKR22 | W | 0.22 | OHM | K | 2W |
| R624 | ERJ6GEYJ332 | M | 3.3K | OHM | J | 1/10W | R831 | ERJ12YJ272 | M | 2.7K | OHM | J | 1/2W |
| R626 | ERJ6GEYJ473 | M | 47K | OHM | J | 1/10W | R832 | ERJ12YJ272 | M | 2.7K | OHM | J | 1/2W |
| R628 | ERJ8GCY0R00 | M | 0 | OHM | | 1/8W | R833 | ERJ12YJ5R6 | M | 5.6 | OHM | J | 1/2W |
| R629 | ERJ12YJ100 | M | 10 | OHM | J | 1/2W | R835 | ERG2SJ223 | M | 22K | OHM | J | 2W |
| R630 | ERJ12YJ471 | M | 470 | OHM | J | 1/2W | R836 | ERG2SJ223 | M | 22K | OHM | J | 2W |
| R631 | ERJ8GCYJ471 | M | 470 | OHM | J | 1/8W | R837 | ERJ12YJ434 | M | 430K | OHM | J | 1/2W |
| R632 | ERJ8GCYJ152 | M | 1.5K | OHM | J | 1/8W | R838 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W |
| R633 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W | R839 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W |
| R634 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W | R840 | ERJ6GEYJ102 | M | 1K | OHM | J | 1/10W |
| R635 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W | R841 | ERJ6GEYJ473 | M | 47K | OHM | J | 1/10W |
| R636 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W | R842 | ERJ6GEYJ683 | M | 68K | OHM | J | 1/10W |
| R637 | ERJ6GEYJ102 | M | 1K | OHM | J | 1/10W | R843 | ERJ12YJ122 | M | 1.2K | OHM | J | 1/2W |
| R638 | ERJ6GEYJ333 | M | 33K | OHM | J | 1/10W | R845 | ERJ6ENF2211 | M | 2.21K | OHM | F | 1/10W |
| R639 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R846 | ERJ6GEYJ122 | M | 1.2K | OHM | J | 1/10W |
| R640 | ERQ14AJR22HK | F | 0.22 | OHM | J | 1/4W | R847 | ERJ6GEYJ472 | M | 4.7K | OHM | J | 1/10W |
| R650 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W | R848 | ERJ6GEYJ472 | M | 4.7K | OHM | J | 1/10W |
| R651 | ERJ6ENF4300 | M | 430 | OHM | F | 1/10W | R849 | ERJ6GEYJ472 | M | 4.7K | OHM | J | 1/10W |
| R652 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W | R856 | ERJ6GEYJ102 | M | 1K | OHM | J | 1/10W |
| R654 | ERJ6ENF1302 | M | 13K | OHM | F | 1/10W | R857 | ERJ6GEYJ222 | M | 2.2K | OHM | J | 1/10W |
| R655 | ERJ6ENF1202 | M | 12K | OHM | F | 1/10W | R858 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W |
| R656 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W | R859 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W |
| R657 | ERJ6ENF1822 | M | 18.2K | OHM | F | 1/10W | R861 | ERJ6GEYJ102 | M | 1K | OHM | J | 1/10W |
| R658 | ERJ6ENF1822 | M | 18.2K | OHM | F | 1/10W | R862 | ERJ6GEYJ392 | M | 3.9K | OHM | J | 1/10W |
| R661 | ERJ6ENF4300 | M | 430 | OHM | F | 1/10W | R863 | ERJ6GEYJ153 | M | 15K | OHM | J | 1/10W |
| R662 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W | R864 | ERJ6ENF2491 | M | 2.49K | OHM | F | 1/10W |
| R664 | ERJ6ENF1302 | M | 13K | OHM | F | 1/10W | R865 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W |
| R665 | ERJ6ENF1202 | M | 12K | OHM | F | 1/10W | R866 | ERJ6ENF2491 | M | 2.49K | OHM | F | 1/10W |
| R666 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W | R867 | ERJ6GEYJ182 | M | 1.8K | OHM | J | 1/10W |
| R667 | ERJ6ENF1822 | M | 18.2K | OHM | F | 1/10W | R868 | ERJ6GEYJ331 | M | 330 | OHM | J | 1/10W |
| R668 | ERJ6ENF1822 | M | 18.2K | OHM | F | 1/10W | R869 | ERJ6ENF93R1 | M | 93.1 | OHM | F | 1/10W |
| R669 | ERJ6GEYJ102 | M | 1K | OHM | J | 1/10W | R870 | ERJ6ENF2491 | M | 2.49K | OHM | F | 1/10W |
| R671 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R871 | ERJ6ENF2491 | M | 2.49K | OHM | F | 1/10W |
| R672 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R874 | TAJAGD0R05JB | M | 0.05 | OHM | J | 1W |
| R673 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R875 | ERJ6GEYJ752 | M | 7.5K | OHM | J | 1/10W |
| R674 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R876 | ERJ6ENF4751 | M | 4.75K | OHM | F | 1/10W |
| R675 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R877 | ERJ6GEYJ102 | M | 1K | OHM | J | 1/10W |
| R678 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W | R878 | ERJ6GEYJ152 | M | 1.5K | OHM | J | 1/10W |
| R679 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W | R879 | ERJ6GEYJ471 | M | 470 | OHM | J | 1/10W |
| R680 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W | R880 | ERJ12YJ100 | M | 10 | OHM | J | 1/2W |
| R681 | ERJ6GEYJ224 | M | 220K | OHM | J | 1/10W | R881 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W |
| R682 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R882 | ERJ12YJ471 | M | 470 | OHM | J | 1/2W |
| R683 | ERJ6GEYJ223 | M | 22K | OHM | J | 1/10W | R883 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W |
| R684 | ERJ6GEYJ224 | M | 220K | OHM | J | 1/10W | R891 | ERJ12YJ122 | M | 1.2K | OHM | J | 1/2W |
| R685 | ERJ6GEYJ224 | M | 220K | OHM | J | 1/10W | R892 | ERJ6GEYJ101 | M | 100 | OHM | J | 1/10W |
| R686 | ERJ6GEYJ222 | M | 2.2K | OHM | J | 1/10W | R893 | ERX1SZJR12 | M | 0.12 | OHM | J | 1W |
| R687 | ERJ6GEYJ222 | M | 2.2K | OHM | J | 1/10W | R1000 | ERJ12NF76R8 | M | 76.8 | OHM | F | 1/2W |
| R688 | ERJ6GEYJ823 | M | 82K | OHM | J | 1/10W | R1001 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W |
| R689 | ERJ6GEYJ104 | M | 100K | OHM | J | 1/10W | R1002 | ERJ6GEYJ183 | M | 18K | OHM | J | 1/10W |
| R690 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W | R1003 | ERJ6GEYJ221 | M | 220 | OHM | J | 1/10W |
| R691 | ERJ12YJ471 | M | 470 | OHM | J | 1/2W | R1004 | ERJ6GEYJ471 | M | 470 | OHM | J | 1/10W |
| R692 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W | R1005 | ERJ6GEYJ221 | M | 220 | OHM | J | 1/10W |
| R693 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W | R1006 | ERJ6GEYJ471 | M | 470 | OHM | J | 1/10W |
| R695 | ERJ6GEY0R00 | M | 0 | OHM | | 1/10W | R1007 | ERJ6GEYJ181 | M | 180 | OHM | J | 1/10W |
| R801 | ERC12AGK394 | S | 390K | OHM | K | 1/2W | R1008 | ERJ6GEYJ181 | M | 180 | OHM | J | 1/10W |
| R823 | ERJ12YJ124 | M | 120K | OHM | J | 1/2W | R1009 | ERJ6GEYJ471 | M | 470 | OHM | J | 1/10W |
| R824 | ERJ12YJ563 | M | 56K | OHM | J | 1/2W | R1010 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W |
| R825 | ERG3FJ223 | M | 22K | OHM | J | 3W | R1011 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W |
| R826 | ERG3FJ223 | M | 22K | OHM | J | 3W | R1012 | ERJ6GEYJ103 | M | 10K | OHM | J | 1/10W |

| Ref.No. | Part No. | Description | | | | Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| R1013 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1221 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W |
| R1014 | ERJ6GEYJ560 | M | 56 OHM | J | 1/10W | R1222 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W |
| R1015 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1223 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W |
| R1016 | ERJ6GEYJ101 | M | 100 OHM | J | 1/10W | R1224 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1017 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W | R1225 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1018 | ERJ6GEYJ271 | M | 270 OHM | J | 1/10W | R1226 | ERJ8GCY0R00 | M | 0 OHM | | 1/8W |
| R1019 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1300 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W |
| R1020 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1301 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W |
| R1021 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1302 | ERJ6GEYJ272 | M | 2.7K OHM | J | 1/10W |
| R1022 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1303 | ERJ6ENF6811 | M | 6.81K OHM | F | 1/10W |
| R1023 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1304 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1024 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W | R1305 | ERJ6ENF1003 | M | 100K OHM | F | 1/10W |
| R1025 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W | R1306 | ERJ6ENF4701 | M | 4.7K OHM | F | 1/10W |
| R1026 | ERJ8GCY0R00 | M | 0 OHM | | 1/8W | R1307 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1100 | ERJ12NF76R8 | M | 76.8 OHM | F | 1/2W | R1308 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1101 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1309 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1102 | ERJ6GEYJ183 | M | 18K OHM | J | 1/10W | R1310 | ERJ6ENF1502 | M | 15K OHM | F | 1/10W |
| R1103 | ERJ6GEYJ221 | M | 220 OHM | J | 1/10W | R1312 | ERJ6ENF1502 | M | 15K OHM | F | 1/10W |
| R1104 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1313 | ERJ6ENF4701 | M | 4.7K OHM | F | 1/10W |
| R1105 | ERJ6GEYJ221 | M | 220 OHM | J | 1/10W | R1314 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1106 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1315 | ERJ6ENF2702 | M | 27K OHM | F | 1/10W |
| R1107 | ERJ6GEYJ181 | M | 180 OHM | J | 1/10W | R1316 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1108 | ERJ6GEYJ181 | M | 180 OHM | J | 1/10W | R1317 | ERJ6ENF2702 | M | 27K OHM | F | 1/10W |
| R1109 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1318 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1110 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1319 | ERJ6ENF2702 | M | 27K OHM | F | 1/10W |
| R1111 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1320 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1112 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1321 | ERJ6ENF2702 | M | 27K OHM | F | 1/10W |
| R1113 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1322 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1114 | ERJ6GEYJ560 | M | 56 OHM | J | 1/10W | R1323 | ERJ6ENF1302 | M | 13K OHM | F | 1/10W |
| R1115 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1324 | ERJ6ENF1802 | M | 18K OHM | F | 1/10W |
| R1116 | ERJ6GEYJ101 | M | 100 OHM | J | 1/10W | R1325 | ERJ6ENF2702 | M | 27K OHM | F | 1/10W |
| R1117 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W | R1326 | ERJ6ENF1002 | M | 10K OHM | F | 1/10W |
| R1118 | ERJ6GEYJ271 | M | 270 OHM | J | 1/10W | R1327 | ERJ6ENF2701 | M | 2.7K OHM | F | 1/10W |
| R1119 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R1328 | ERJ6GEYJ101 | M | 100 OHM | J | 1/10W |
| R1120 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1400 | ERJ6ENF2202 | M | 22K OHM | F | 1/10W |
| R1121 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1401 | ERJ6ENF2372 | M | 23.7K OHM | F | 1/10W |
| R1122 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1402 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1123 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R1403 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1124 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W | R1404 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1125 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W | R1405 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W |
| R1126 | ERJ8GCY0R00 | M | 0 OHM | | 1/8W | R1406 | ERJ6GEYJ100 | M | 10 OHM | J | 1/10W |
| R1200 | ERJ12NF76R8 | M | 76.8 OHM | F | 1/2W | R1407 | ERJ6GEYJ472 | M | 4.7K OHM | J | 1/10W |
| R1201 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R1408 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1202 | ERJ6GEYJ183 | M | 18K OHM | J | 1/10W | R2204 | ERJ8GCY0R00 | M | 0 OHM | | 1/8W |
| R1203 | ERJ6GEYJ221 | M | 220 OHM | J | 1/10W | R2408 | ERJ6GEYJ100 | M | 10 OHM | J | 1/10W |
| R1204 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R6000 | ERJ6GEYJ100 | M | 10 OHM | J | 1/10W |
| R1205 | ERJ6GEYJ221 | M | 220 OHM | J | 1/10W | R6001 | ERJ6GEYJ100 | M | 10 OHM | J | 1/10W |
| R1206 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R6002 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1207 | ERJ6GEYJ181 | M | 180 OHM | J | 1/10W | R6003 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1208 | ERJ6GEYJ181 | M | 180 OHM | J | 1/10W | R6004 | EXBS8V473J | RR | COMBINATION | | |
| R1209 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R6005 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1210 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R6006 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1211 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R6007 | EXBS8V101J | RR | COMBINATION | | |
| R1212 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R6008 | ERJ6GEYJ101 | M | 100 OHM | J | 1/10W |
| R1213 | ERJ6GEYJ103 | M | 10K OHM | J | 1/10W | R6010 | ERJ6GEYJ100 | M | 10 OHM | J | 1/10W |
| R1214 | ERJ6GEYJ560 | M | 56 OHM | J | 1/10W | R6011 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W |
| R1215 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R6012 | ERJ6GEYJ102 | M | 1K OHM | J | 1/10W |
| R1216 | ERJ6GEYJ101 | M | 100 OHM | J | 1/10W | R6014 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1217 | ERJ6GEYJ331 | M | 330 OHM | J | 1/10W | R6015 | ERJ6GEYJ473 | M | 47K OHM | J | 1/10W |
| R1218 | ERJ6GEYJ271 | M | 270 OHM | J | 1/10W | R6024 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1219 | ERJ6GEYJ471 | M | 470 OHM | J | 1/10W | R6044 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |
| R1220 | ERJ6GEYJ330 | M | 33 OHM | J | 1/10W | R6050 | ERJ6GEY0R00 | M | 0 OHM | | 1/10W |

| Ref.No. | Part No. | Description |
|---|---|---|
| R6051 | ERJ6GEYJ103 | M 10K OHM J 1/10W |
| R6056 | ERJ6GEYJ103 | M 10K OHM J 1/10W |
| R6057 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6058 | ERJ6GEYJ332 | M 3.3K OHM J 1/10W |
| R6304 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6305 | ERJ6GEYJ681 | M 680 OHM J 1/10W |
| R6306 | ERJ6GEYJ681 | M 680 OHM J 1/10W |
| R6307 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6404 | ERJ6GEYJ681 | M 680 OHM J 1/10W |
| R6405 | ERJ6GEYJ681 | M 680 OHM J 1/10W |
| R6406 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6407 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6504 | ERJ6GEYJ681 | M 680 OHM J 1/10W |
| R6505 | ERJ6GEYJ681 | M 680 OHM J 1/10W |
| R6506 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6507 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6523 | ERJ6GEYJ331 | M 330 OHM J 1/10W |
| R6524 | ERJ6GEYJ331 | M 330 OHM J 1/10W |
| R6600 | ERJ6GEYJ101 | M 100 OHM J 1/10W |
| R6601 | ERJ6GEYJ822 | M 8.2K OHM J 1/10W |
| R6602 | ERJ6GEYJ822 | M 8.2K OHM J 1/10W |
| R6603 | ERJ6GEYJ474 | M 470K OHM J 1/10W |
| R6605 | ERJ6GEYJ223 | M 22K OHM J 1/10W |
| R6606 | ERJ6GEYJ222 | M 2.2K OHM J 1/10W |
| R6607 | ERJ6GEYJ912 | M 9.1K OHM J 1/10W |
| R6608 | ERJ6GEYJ223 | M 22K OHM J 1/10W |
| R6611 | ERJ6GEYJ102 | M 1K OHM J 1/10W |
| R6612 | ERJ6GEYJ153 | M 15K OHM J 1/10W |
| R6615 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R6616 | ERJ6GEYJ562 | M 5.6K OHM J 1/10W |
| R6617 | ERJ6GEYJ562 | M 5.6K OHM J 1/10W |
| R6618 | ERJ6GEYJ181 | M 180 OHM J 1/10W |
| R6619 | ERJ6GEYJ471 | M 470 OHM J 1/10W |
| R6620 | ERJ6GEYJ104 | M 100K OHM J 1/10W |
| R6621 | ERJ6GEYJ100 | M 10 OHM J 1/10W |
| R6622 | ERJ6GEYJ103 | M 10K OHM J 1/10W |
| R6623 | ERJ6GEYJ181 | M 180 OHM J 1/10W |
| R8003 | ERJ6GEYJ223 | M 22K OHM J 1/10W |
| R8004 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R8005 | ERJ6GEYJ223 | M 22K OHM J 1/10W |
| R8006 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R8009 | ERJ6GEYJ223 | M 22K OHM J 1/10W |
| R8010 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R8017 | ERJ6GEYJ102 | M 1K OHM J 1/10W |
| R8020 | ERJ6GEYJ271 | M 270 OHM J 1/10W |
| R8021 | ERJ6GEYJ102 | M 1K OHM J 1/10W |
| R8023 | ERJ6ENF1001 | M 1K OHM F 1/10W |
| R8024 | ERJ6GEYJ271 | M 270 OHM J 1/10W |
| R8031 | ERJ6ENF1601 | M 1.6K OHM F 1/10W |
| R8032 | ERJ6ENF5101 | M 5.1K OHM F 1/10W |
| R8041 | ERJ6GEYJ471 | M 470 OHM J 1/10W |
| R8042 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R8044 | ERJ6GEYJ102 | M 1K OHM J 1/10W |
| R8045 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R8047 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| R8048 | ERJ6GEY0R00 | M 0 OHM 1/10W |
| | OTHERS | |
| | TJTX001 | HEXAGON POST |
| | TUCC5388-1 | TERMINAL BRACKET |
| | TUCC5391 | DC JACK BRACKET |
| | TUC87574 | AC INLET BRACKET |

| Ref.No. | Part No. | Description |
|---|---|---|
| | XTV3+12J | SCREW |
| | XWG3F10 | WASHER |
| ⚠ F801 | XBA2C40TB15L | FUSE(4.0A) |
| FG1 | TJC85341 | EARTH LUG |
| FG2 | TJC85341 | EARTH LUG |
| FG3 | TJC85341 | EARTH LUG |
| FG4 | TJC85341 | EARTH LUG |
| FG5 | TJC85341 | EARTH LUG |
| FG6 | TJC85341 | EARTH LUG |
| FG7 | TJC85341 | EARTH LUG |
| FG8 | TJC85341 | EARTH LUG |
| FG9 | TJC85341 | EARTH LUG |
| FG10 | TJEA057 | LUG TERMINAL |
| FG11 | TJEA057 | LUG TERMINAL |
| FG12 | TJEA057 | LUG TERMINAL |
| FS801 | TJC85502T | FUSE HOLDER |
| FS802 | TJC85502T | FUSE HOLDER |
| ⚠ N150 | EMCS0451ML | 4P CONNECTOR(L-TYPE) |
| ⚠ N151 | TJSF09414 | 14P CONNECTOR(L-TYPE) |
| ⚠ N152 | TJSF09414 | 14P CONNECTOR(L-TYPE) |
| ⚠ N651 | TJSF35503 | 3P CONNECTOR |
| ⚠ N661 | TJSF35503 | 3P CONNECTOR |
| ⚠ N801 | TJS8A9361 | AC SOCKET |
| ⚠ N851A | TJSF35919 | 19P CONNECTOR |
| ⚠ N851B | TJSF36019 | 19P CONNECTOR |
| ⚠ N852A | TJSF35907 | 7P CONNECTOR |
| ⚠ N852B | TJSF36007 | 7P CONNECTOR |
| ⚠ N1000 | TJS8A9880 | 15P CONNECTOR |
| ⚠ N6000A | TJSF07833 | 33P CONNECTOR |
| ⚠ N6000B | TJSF16333 | 33P CONNECTOR |
| ⚠ N6001A | TJSF07833 | 33P CONNECTOR |
| ⚠ N6001B | TJSF16333 | 33P CONNECTOR |
| ⚠ N6002 | TJSF35870 | 7OP CONNECTOR |
| ⚠ PC831 | ON3171 | PHOTO COUPLER |
| ⚠ PC832 | ON3171 | PHOTO COUPLER |
| ⚠ PC833 | ON3171 | PHOTO COUPLER |
| SW158 | EVQ11L04M | SWITCH |
| SW159 | EVQ11L04M | SWITCH |
| SW160 | EVQ11L04M | SWITCH |
| SW161 | EVQ11L04M | SWITCH |
| SW162 | EVQ11L04M | SWITCH |
| ⚠ SW801 | ESB91234A | SWITCH(POWER) |
| ⚠ TH801 | ERTD5RFL8ROT | THERMISTOR |
| TH1300 | TAT107J683T | THERMISTOR |
| X100 | TSSA051 | CRYSTAL OSCILLATOR |